

E-MENTORING AND TEACHER RETENTION IN THE MISSISSIPPI DELTA

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Abstract

The majority of Teach For America (TFA) teachers in the rural Mississippi Delta leave the region at the conclusion of their two-year teaching commitment with the TFA program. Though retaining teachers beyond two years is not an explicit goal of TFA, schools and districts in Mississippi often turn to TFA as a solution for filling teacher vacancies in Delta classrooms. The mismatch between TFA goals and district hiring of TFA teachers to fill vacancies means that the program is not currently a long-term solution for the region's teacher shortage. A needs assessment found that TFA teacher attrition in the Delta is driven by a variety of factors, including working conditions, administrative and collegial relationships, and feelings of isolation. In the broader research literature, mentoring has been shown to positively influence teacher retention. Additionally, teachers with strong informal relationships in and out of school are more likely to feel satisfied in their work and remain in the profession. The rural geography and cultural context of the Mississippi Delta contribute to teachers' challenges with building formal and informal relationships, as appropriate mentors and support networks are not always in near proximity. This dissertation explores the use of technology to overcome such challenges. A virtual intervention that connected ten TFA teachers with an e-mentor was conducted to examine whether e-mentoring holds promise for promoting higher rates of retention in rural communities. Through a qualitative analysis of participant survey responses prior to and after the conclusion of e-mentoring, key findings included that teachers valued and were able to develop meaningful relationships within a virtual mentoring context and that e-mentoring could encourage teachers wavering about staying in the region to remain for another year of teaching in the Delta.

Keywords: teacher attrition, teacher retention, rural education, Mississippi Delta, Teach For America (TFA), mentoring, e-mentoring

Dissertation Adviser: Dr. Annette Anderson

Image of dissertation approval form goes here.

Dedication

This dissertation is dedicated to the following people:

- To the educators of the Mississippi Delta who love and guide young people every day.
- To the educators who believed in me and in whose footsteps I follow, particularly Ms. Criselda Lozon, Mrs. Cathy Colglazier, Dr. Maud McInerney, and Ms. Ruby Brown.
- To the educators in my family, particularly my parents, who model curiosity and lifelong learning.
- And to AB, whom I love.

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Dr. Mayes' questioning and feedback will have a lasting influence on my scholarship and on how I approach issues in education. He played a key role from the beginning and pushed me to identify and narrow a problem of practice, to develop stronger research methods, and to present my ideas with greater clarity. His guidance has reshaped the way I approach academic writing, and for that I will always be grateful.

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Executive Summary

The purpose of this study was to describe the potential of e-mentoring for supporting TFA teacher retention in the rural Mississippi Delta. The researcher designed and implemented an intervention that used e-mentoring to positively influence teachers' perceptions of their relationships in and out of school, their teacher skill, and their understanding of the cultural context in which they live and work, all factors associated with higher rates of retention in the broader research literature. The intervention was examined through mixed-methods analysis of teachers' responses on pre- and post-surveys administered before and after the e-mentoring intervention.

Problem of Practice

Teacher attrition has been a growing challenge within American public education since the early nineties, with rates of teachers leaving the profession pre-retirement exceeding those of new entrants and contributing to teacher shortages in some regions of the country (Darling-Hammond, 2003; Feng, 2014; Ingersoll, 2001, 2002). One area facing a teacher shortage is the Mississippi Delta, a rural region of Mississippi with strong community bonds, high poverty rates, and a predominately Black population of public school students (Adams & Gorton, 2006, Al-Fadhli & Singh, 2010; Hyland, 2008). Like other areas of the country with teacher shortages, many districts in the Mississippi Delta have turned to alternative certification programs such as Teach For America (TFA) to fill staffing needs (Baines, 2010; Brenner, Elder, Wimbish, & Walker, 2015; Drury & Baer, 2011; Heilig & Jez, 2010; Moore, 2011; Veltri, 2008). Nationwide, TFA teachers tend to have higher rates of attrition than the broader teaching force (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Donaldson & Johnson, 2011; Heilig & Jez, 2010;

Veltri, 2008). The same is true for TFA in the Mississippi Delta where most teachers do not remain in their placement classrooms after two years.

Conceptual Frameworks

This section summarizes the two main conceptual frameworks underlying this study: ecological systems theory (EST) and a concept from social cognitive theory known as triadic reciprocal determinism, or triadic reciprocity.

EST

The factors that underpin teachers' decisions to stay in a school, move to another school, or leave the profession exert their influence both independently and in interaction with one another. Drawing on EST (Neal & Neal, 2013), these factors may be seen as part of a complex network or ecological environment: "an overlapping arrangement of structures, each directly or indirectly connected to the others by the direct and indirect social interactions of their participants" (p. 727). In this study, reviews of the literature aimed at understanding the problem of and solutions for teacher attrition, as well as analysis of intervention study data, relied on principles of EST to understand the ways in which factors underlying turnover decisions interact.

Triadic Reciprocity

Social cognitive theory, and in particular Bandura's (1986) theory of triadic reciprocity, form the theoretical underpinnings of e-mentoring as an intervention for promoting TFA teacher retention in the Mississippi Delta. Social cognitive theory posits that "human functioning is explained in terms of a model of triadic reciprocity in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other" (Bandura, 1986, p. 18). In the case of TFA teachers in the Delta, personal factors include teachers' cognition as well as racial, geographical, and regional backgrounds. Environmental

factors include the communities in which teachers live and schools in which they teach, the people with whom they interact in each of these settings, and the experiences they face in and out of school. Following Bandura's (1986) conception of triadic reciprocity, behavior is influenced by personal and environmental factors and include the ways in which teachers think about and respond to settings, other people, and experiences. The theory of triadic reciprocity helps to understand which of the factors related to teacher turnover are best suited for an intervention aimed at supporting teacher retention, and in what ways.

Factors Related to Teacher Turnover

This section describes the factors underlying attrition and retention that are associated in the research literature with three main employment decisions on the part of teachers: staying, or remaining teaching in their current school; moving, or continuing to teach but in a different school; and leaving, or exiting the profession entirely (Goldring, Tale, & Riddles, 2014). Multiple factors contribute to teacher attrition across the United States, including salary (Darling-Hammond, 2003; Harrell, Leavell, van Tassell, & McKee, 2004; Hughes, 2012; Inman & Marlow, 2004; Kersaint, Lewis, Potter, & Meisels, 2007; Stinebrickner, 2001), school location (Feng, 2014; Hughes, 2012; Monk, 2007; Simon & Johnson, 2015), and teacher perceptions of working conditions such as discipline, administrative support, and collegial relationships (Darling-Hammond, 2003; Grissom, 2011; Hanushek, Kain, & Rivkin, 2004; Harrell et al., 2004; Hughes, 2012; Inman & Marlow, 2004; Johnson, Kraft, & Papay, 2012; Kersaint et al., 2007; Kukla-Acevedo, 2009; Ladd, 2011; Malloy & Allen, 2011; Renzulli, Parrott, & Beattie, 2011; Schlichte, Yssel, & Merbler, 2005; Simon & Johnson, 2015). Turnover is also influenced both by student body characteristics such as race and family income (Hanushek et al., 2004; Ingersoll, 2001; Johnson et al., 2012; Miller, 2012; Renzulli et al., 2011) and teacher characteristics such as

teacher self-efficacy (Hanushek et al., 2004; Pedota, 2015; Yost, 2006), age (Guarino, Santibañez, & Daley, 2006; Hanushek et al., 2004; Ingersoll, 2001; Kukla-Acevedo, 2009), race (Ingersoll, 2001; Hanushek et al., 2004; Simon & Johnson, 2015), place background (Boyd, Lankford, Loeb, & Wyckoff, 2005), and academic backgrounds (DeAngelis & Presley, 2011; Feng, 2014; Henke, Zahn, & Carroll, 2001; Podgursky, Monroe, & Watson, 2004; Stinebrickner, 2001).

Place

Understanding teacher attrition and retention in the Mississippi Delta requires attention to the specificities of rural education and to teaching in the Delta region more specifically. Rural teachers face challenges unique to their contexts, including lack of access to goods and services, geographic, professional, and social isolation, higher poverty rates, and lower teacher salaries than other regions (Arnold, Newman, Gaddy, & Dean, 2005; Azano & Stewart, 2015; Beesley, Atwill, Blair, & Barley, 2010; Burton, Brown, & Johnson, 2013; Hammer, Hughes, McClure, Reeves, & Salgado, 2005; Harrell et al., 2004; McClure & Reeves, 2004; McCoy, 2006; Miller, 2012; Monk, 2007). The rural Deep South's high poverty rates, high proportion of African American students, and high dropout rates contribute to the region's schools' struggle to recruit teachers, and vacancies due to attrition often remain unfilled (Hodges, Tippins, & Oliver, 2013). The Mississippi Delta is one such rural region that has faced challenges from teacher shortages and difficulties in retaining teachers (McCoy, 2006; Moore, 2011). Within the rural Mississippi Delta context, additional factors such as the continued racial segregation of schools, mistrust of outsiders, and feelings of isolation further drive teacher attrition (Hyland, 2008; McCoy, 2006; Polidore, Edmonson, & Slate, 2010; Walker-Gibbs, Ludecke, & Kline, 2015).

Needs Assessment Findings

A needs assessment that focused specifically on TFA teachers in their second year of teaching in the rural Mississippi Delta was conducted during the 2015-2016 school year. The needs assessment took the form of a survey asking teachers whether they would be staying, moving, or leaving for the following school year, and to describe the causes and factors affecting the choices as related to the factors described in the previous section. Results were analyzed from 73 teachers' survey responses, finding that 27.44 % of teachers were stayers, 43.8% were movers, and 28.8% were leavers. Teacher demographic characteristics such as racial and regional background were related to turnover in ways that largely align with findings in the broader research literature. Dominant themes in survey responses included perceptions of school leadership, working conditions, and isolation. Of these, isolation was most frequently cited by teachers from all groups as a disadvantage of living and teaching in the Delta. Isolation therefore emerged as one primary factor among several factors driving attrition among TFA teachers in the Mississippi Delta.

Support for Intervention

Johnson et al.'s (2012) study of working conditions demonstrates that both environmental factors and the ways in which teachers think about those factors can have a stronger influence on retention than personal characteristics such as demographics, though these also influence retention (Hanushek et al. 2004). Structured collaboration, including mentoring programs aimed at supporting new teachers, has been shown to positively affect teacher retention in numerous settings (Brill & McCartney, 2008; Darling-Hammond, 2003; Hallam et al., 2012; Inman & Marlow, 2004; Odell & Ferraro, 1992; Smith & Ingersoll, 2004; Yost, 2006). Mentoring programs have been shown to support teachers' professional skill-building (Clandinin et al.,

2015; Schlichte, Yssel, & Merbler, 2005), development of self-efficacy (Moulding, Stewart, & Dunmeyer, 2014), and integration into a community of teachers (Waddell, 2010), all factors that also support teacher retention. Hallam et al. (2012) find that strong relationships between teachers and mentors are the most helpful part of mentoring as regards to increasing teacher retention. Malloy and Allen (2007) find that mentoring is an effective solution in rural settings, but the context of the rural Mississippi Delta means that mentors are not always available in close proximity to TFA teachers.

E-mentoring, or mentoring conducted through the use of virtual technologies, is a practical, short-term option for promoting retention of TFA teachers in the Mississippi Delta through influencing how participants think about their experiences, with research consistently demonstrating the effectiveness of mentoring generally (e.g. Smith & Ingersoll, 2004) and through the use of online technology to transcend distance in rural areas (Quintana & Zambrano, 2014). E-mentoring has been shown to have a positive influence on teachers' perceptions of several aspects of their personal and professional lives, including self-efficacy (Anthony, Gimbert, Fultz, & Parker, 2011), relationships with mentors (Bierema & Merriam, 2002; Murphy, 2011; Rowland, 2012; Watson, 2006), and relationships inside and out of school (Murphy, 2011). Furthermore, Quintana and Zambrano (2014) found that e-mentoring was effective for teachers in rural areas in limiting isolation.

Research Questions

This study describes an e-mentoring intervention aimed at supporting teacher retention by addressing the factors driving attrition described above. The following research questions are examined through the study design.

1. What is the effect of e-mentoring on TFA Mississippi Delta teachers' intentions to stay as teachers in their placement schools, move to teach elsewhere, or leave the teaching profession following their two-year TFA commitment?
2. What aspects of e-mentoring influenced teachers' intentions to stay, move, or leave, if any?

The hypothesis underlying the intervention is that teachers will be more likely to decide to remain teaching in the Delta after participating in e-mentoring as compared to their intentions prior to e-mentoring

Outcome Evaluation Design

A survey was conducted during teachers' second year with TFA in the Mississippi Delta in which they described their decisions regarding staying, moving, and leaving for the following school year and how these related to the experience of e-mentoring. This outcome evaluation used a pretest-posttest design in which the target population took the same survey prior to and after engaging in the e-mentoring intervention. Teacher mobility was reported through responses to a questionnaire item in which teachers indicated whether they would be remaining in their placement school, teaching at another school, or leaving teaching at the beginning of the following school year. Quantitative analysis of responses to this question that compared responses across the two survey timeframes provided the basis for impact evaluation of the effectiveness of the e-mentoring intervention as it related to teacher turnover. The study used a concurrent triangulation design in which qualitative data were also gathered in order to help explain and interpret the findings of the quantitative survey question about turnover.

Variables and Description of Measurement

Several variables were measured in order to describe the effectiveness of an e-mentoring initiative in promoting teacher retention in rural Mississippi. The dependent variable was teacher mobility, or teachers' intentions to stay, move, or leave. The independent variable was the treatment of e-mentoring, defined as "a computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling" (Bierema & Merriam, 2002, p. 214). Several mediating variables related to teachers' perceptions about various conditions of their work and life in rural Mississippi were also measured, as these demonstrate the relationship between e-mentoring and teacher mobility. Mediating variables related to this study are teachers' perceptions of their professional skills, relationships with school leadership, relationships with colleagues, and feelings of isolation. Moderator variables, specifically teacher race and place-type background, were also measured as these might influence turnover choices although they are not directly addressed by the treatment of e-mentoring.

Intervention Design

The e-mentoring intervention was conducted in the spring of 2019 and took the form of virtual meetings occurring every other week between 10 second-year TFA teachers and a mentor who had experience teaching in the Delta through TFA. Mentors and mentees also communicated on an informal basis between mentoring sessions as part of the development and maintenance of their personal relationships. Bi-weekly mentoring conversations focused on underlying processes with relationships to retention, such as professional skills, cultural competence, and relationship building, all factors that emerged in a review of the problem of teacher attrition and in needs assessment findings.

Findings and Conclusions

Though not broadly generalizable, this descriptive study illustrates promising practices for implementing e-mentoring as a support for teacher retention with TFA teachers in the Mississippi Delta and in other contexts and with other populations. Prior to beginning e-mentoring, six participants were committed to remaining in the Delta for a third year of teaching, one had plans to move elsewhere, and three were planning to leave the profession. At the end of the e-mentoring intervention there was no change in the number of teachers choosing to stay, but three were deciding to teach elsewhere and only one had opted to leave the profession. Only five out of the ten teachers on the pre-survey believed e-mentoring could have an influence on their decisions to stay, move or leave, while eight out of the ten teachers believed it could have an influence in their post-survey responses. Several teachers described a belief that e-mentoring could have a stronger influence on turnover if it had occurred earlier in their tenure with TFA.

Analysis of participant survey responses showed that relationships with a mentor were most frequently described as a benefit of e-mentoring both before and after the intervention, with stronger positive beliefs appearing in post-survey responses. This finding is consistent with research literature (e.g., Hallam et al., 2012; Odell & Ferraro, 1992; Smith & Ingersoll, 2004) suggesting that teachers value the relationship they form with a mentor as the most valuable aspect of mentoring. The only leaver at the end of the e-mentoring intervention did not describe relationships as a positive of e-mentoring, a finding that supports the claim that relationships are central to successful e-mentoring for the purpose of increasing teacher retention. The fact that relationships between e-mentor and mentee in the intervention did not occur in a face to face setting was a source of nervousness for teachers prior to the intervention, but not considered a drawback following the intervention. Consistent with findings described in the broader research

literature (e.g., Bierema & Merriam, 2002; Murphy, 2011; Rowland, 2012; Watson, 2006), teachers who participated in e-mentoring valued the relationships built with their mentor despite the lack of face-to-face proximity.

After relationships, the area next described as most beneficial by participants in the e-mentoring intervention was the development of their teaching skill. All teachers agreed or strongly agreed that e-mentoring could have a positive influence on their teacher skills. E-mentoring might have its most meaningful effect on the development of teacher skill through its support of teacher self-efficacy. In teachers' post-surveys, seven of the ten participants described changes they made in their practice or feelings of confidence related to their practice as a result of e-mentoring conversations, and one teacher explicitly named the positive effects of e-mentoring on self-efficacy even though this term was not used on the survey instrument. This finding aligns with Anthony et al.'s (2011) finding that teachers who participated in bi-weekly e-mentoring, the same cadence at which the teachers in the intervention participated, had measurable increases in self-efficacy and also reported growth in their teaching skill.

Conclusion

Returning to the Bandura's (1986) conception of triadic reciprocity, behavior is influenced by personal and environmental factors and includes the ways in which teachers think about and respond to settings, other people, and experiences. Given TFA Mississippi's organizational limitations in controlling for or changing personal factors like teacher backgrounds or environmental factors like working conditions, the e-mentoring intervention appropriately fit within Bandura's (1986) conceptual framework by addressing the cognitive aspects of participants' experience of their two-year commitment in the Delta. E-mentoring supported how teacher's thought about their experiences at and outside of school in a way that

was tailored to their interests, goals, and preferences as individuals. The research literature shows that all three types of factors—personal, environmental, and cognitive—are associated with teacher attrition and retention. The e-mentoring intervention, by influencing cognitive factors, did not override personal and environmental factors in instances where one of these two areas seemed to be more salient for participants, such as those who had already decided to move to be closer to family. In instances where people were wavering and their cognitive factors could be more influential, however, e-mentoring seems to be a promising practice for increasing teacher retention.

Chapter 1

Holes in the Bucket: The Problem of Teacher Attrition

Teacher attrition, or teacher turnover, has been a growing challenge within American public education since the early nineties, with rates of teachers leaving the profession pre-retirement exceeding those of new entrants (Darling-Hammond, 2003; Feng, 2014; Ingersoll, 2001, 2002). A variety of policies, such as higher pay, student loan forgiveness, housing support, and expanded alternative certification programs have been implemented to encourage new teachers to enter the profession and current teachers to remain in the classroom (e.g., Guarino, Santibañez, & Daly, 2006; Hanushek, Kain, & Rivkin, 2004; Monk, 2007). Despite initiatives aimed at increasing the number of teachers entering and remaining in schools, attrition must also be addressed in order to maintain an adequate teaching force:

Recruiting more teachers will not solve the teacher crisis if large numbers of such teachers then leave. The image that comes to mind is a bucket rapidly losing water because of holes in the bottom. Pouring more water into the bucket will not be the answer if the holes are not first patched. (Ingersoll, 2002, p. 42)

Ingersoll's (2002) bucket metaphor conceptualizes teacher retention and attrition from an economic perspective. Guarino et al. (2006) summarize the way in which some of the most frequently cited research on teacher turnover and retention, such as Hanushek et al. (2004) and Ingersoll (2001), applies the economic theory of supply and demand to the teacher labor market:

We define *demand* for teachers as the number of teaching positions offered at a given level of overall compensation and the *supply* of teachers as the number of qualified individuals willing to teach at a given level of compensation. By overall compensation, we mean not only salaries (including bonuses, other forms of monetary compensation,

and expected future earnings) and benefits but also any other type of reward derived from teaching that can be encompassed under the heading of “working conditions” or “personal satisfaction.” (p. 174)

Given that many American schools and districts face high rates of teacher attrition, or holes in the bucket, the theory of supply and demand indicates that some aspect of teachers’ overall compensation is not meeting the needs required in order to remain in the profession. Without addressing factors related to compensation, the supply of teachers will not reach equilibrium with demand, thus leaving a constant shortage in the labor market for teachers. These factors include salary (Darling-Hammond, 2003; Harrell, Leavell, van Tassel, & McKee, 2004; Hughes, 2012; Inman & Marlow, 2004; Kersaint, Lewis, Potter, & Meisels, 2007; Stinebrickner, 2001), school location (Feng, 2014; Hughes, 2012; Monk, 2007; Simon & Johnson, 2015), and teacher perceptions of working condition factors such as discipline, administrative support, and collegial relationships (Darling-Hammond, 2003; Grissom, 2011; Hanushek et al., 2004; Harrell et al., 2004; Hughes, 2012; Kersaint et al., 2007; Kukla-Acevedo, 2009; Ladd, 2011; Renzulli, Parrott, & Beattie, 2011; Simon & Johnson, 2015).

A teacher shortage poses problems for schools and students in several ways. These problems include heavy financial costs for districts and states and increased reliance on inexperienced or uncertified teachers (Darling-Hammond, 2003; Hallam, Chou, Hite, & Hite, 2012; Hughes, 2012; Miller, 2012). High attrition is also harmful to students’ learning as it decreases the proportion of experienced teachers in classrooms, a group that has been shown to more effectively meet the needs of students than do beginning teachers (Brill & McCartney, 2008; Guarino et al., 2006; Hanushek et al., 2004; Harrell et al., 2004). Indeed, the factors that drive high teacher attrition have been shown to be similar to those that drive low student

achievement (Johnson, Kraft, & Papay, 2012). Meaningfully addressing teacher retention would therefore not only address problems in the teacher labor supply but would also have positive outcomes for students' academic success.

While economic theories provide one framework through which to view issues of teacher turnover, they do not describe all of the factors related to retention and attrition. Economic theories illustrate large-scale trends related to staffing but do not adequately illuminate the social and contextual factors that also contribute to turnover. Research literature shows that issues of compensation contribute to turnover, but factors driving attrition also include student and teacher characteristics, particularly as related to racial, social class, geographical, and educational backgrounds (Darling-Hammond, 2003; Feng, 2014, Grissom, 2011; Hanushek et al., 2004; Harrell et al., 2004; Hughes, 2012; Kersaint et al., 2007; Podgursky, Monroe, & Watson, 2004; Renzulli et al., 2011; Simon & Johnson, 2015). This chapter seeks to describe the factors that most frequently appear in the research literature about teacher attrition and retention. It begins with economic factors such as salary but also addresses sociological factors such as teacher and student characteristics and place context.

Teacher Attrition and Retention in the Mississippi Delta

One area facing teacher shortages is the Mississippi Delta, a rural region of Mississippi with high poverty rates and a predominately Black population of public school students (Adams & Gorton, 2006, Al-Fadhli & Singh, 2010). Like other areas of the country with teacher shortages, many districts in the Mississippi Delta have turned to alternative certification programs such as Teach For America (TFA) to fill staffing needs (Baines, 2010; Brenner, Elder, Wimbish, & Walker, 2015; Drury & Baer, 2011; Heilig & Jez, 2010; Moore, 2011; Veltri, 2008). TFA places high-achieving college graduates and professionals in high-need schools for a two-

year teaching commitment and provides program participants with an initial five-week intensive training period and on-going professional development throughout the two years (Heilig & Jez, 2010; Heineke, Mazza, & Tichnor-Wagner, 2014; Humphrey, Wechsler, & Hough, 2008; Veltri, 2008). The TFA website states that the goal of the program is to cultivate participants' understanding of issues in education, relationship-building with students and communities, and individual leadership through the two-year teaching commitment with the hope that alumni of the program will go on to continue working against educational inequity in a variety of fields and roles (Teach For America, n.d.). As such, addressing teacher shortages or retaining teachers beyond two years are not part of the explicit mission statement of the organization. At the same time, in regions like the Mississippi Delta, school and district leaders often turn to TFA with a different mission in mind and see the organization's teachers as a solution for filling empty and hard-to-staff teaching positions (Brenner et al., 2015). This dissertation takes the position that TFA is being invited into schools and communities in the Mississippi Delta as one part of the solution to the region's teacher shortage and, although retention is not an explicit organizational goal of TFA, attrition of TFA teachers should be examined to see if there are potential ways in which the goals of both TFA and the state can be better achieved.

Nationwide, TFA teachers tend to have higher rates of attrition than the broader teaching force (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Donaldson & Johnson, 2011; Heilig & Jez, 2010; Veltri, 2008). In Donaldson and Johnson's (2011) analysis of TFA teacher attrition and retention, they found that 56.4% of TFA teachers left their placement schools—the schools to which they were assigned by TFA for the two-year commitment—after the two years, and that after four years only 14.8% remained in their placement schools. Though not a direct comparison because of the difference in time frames, Donaldson and Johnson (2011) note that

about 21% of teachers in the broader population who work at high-poverty schools leave their schools each year, as compared to 14% of those at low-poverty schools. As such, turnover is high for teachers at high-poverty schools in general, and in some areas the attrition rates of TFA teachers is twice that of the general teaching population (Heilig & Jez, 2010). The same is true for TFA in the Mississippi Delta where most teachers do not remain in their placement classrooms after two years. At the end of the 2015-2016 school year, fewer than 28% of the TFA teachers who completed their two-year commitment in the Delta region decided to stay for a third year (see Chapter 2). Given the previously described negative consequences of teacher turnover, the organization's challenges with retaining teachers following their two-year commitment means that TFA is not effectively converting teachers in its program into long-term teachers in the Mississippi Delta.

A quick Google search reveals that Mississippi is a place often regarded in the larger American context as backwards and behind. In describing legacies of poverty and racism in the state, the documentary *Spies of Mississippi* quotes President Lyndon B. Johnson as saying, "There's America, there's the South, then there's Mississippi" (Porter, 2013). More recent and quantitative assessments of the state often reinforce this notion of Mississippi as behind the rest of the nation. Measure of America, a project of the Social Science Research Council, uses a combination of health, education, and earning information to assess the American Human Development (HD) Index (Lewis & Burd-Sharps, 2013). In the 2013-2014 Measure of America report, which compares all 50 states and the District of Columbia, Mississippi ranked 51st in HD and had the lowest average life expectancy in the country (Lewis & Burd-Sharps, 2013). Similarly, the Quality Counts 2018 report gave Mississippi a D-plus grade (Education Week, 2018); in 2015 Mississippi ranked last out of all states and the District of Columbia (The

Education Week Research Center, 2015). Even within Mississippi, however, the Delta region stands out for the grim statistics with which it is associated. While the state's average life expectancy is around 75 years old, Quitman County in the Mississippi Delta has a life expectancy of 70 years (Fowler, 2016). Residents of the Delta face food insecurity, poor diet quality, and chronic disease at significantly higher rates than the larger US population (Champagne et al., 2007). Maternal mortality rates in Delta counties are 16% higher than in non-Delta counties (Smith, Sandlin, Bird, Steelman, & Magann, 2014). Similarly, there is a 21% increase in the odds of fetal death in Delta counties as compared with non-Delta counties (Sandlin et al., 2015). While these health outcomes are not directly linked to education, they help illustrate the importance of studying the Mississippi Delta, as opposed to a wider geographic area, because residents of the Delta face regionally specific challenges in many aspects of daily life.

There are many positive aspects of life in the Delta, however, and these assets are just as relevant to the experience of people and communities in the region as are the challenges. The Delta has a rich cultural history, which includes the birth of blues and rock and roll music and the activism of Civil Rights leaders such as Fannie Lou Hamer (Cobb, 1992). As of 2017, 39% of Mississippians were Black or African American, the largest percent of Black residents of any state in the country and with the largest percent of Black homeowners of any state, with the largest concentration of Black residents in the Mississippi Delta counties (Black Demographics, n.d.). The Mississippi Delta also has an often-overlooked history of racial and ethnic diversity, including Lebanese, Syrian, Chinese, and Jewish merchants who integrated themselves into community life (Cobb, 1992). Within education, and more specifically with regards to the issue of teacher attrition, the Delta holds opportunities as well as challenges. Although TFA remains

controversial in much of the national conversation about education, school leaders in the Delta have come to rely on such alternative-route teachers to fill the teacher shortage (Brenner et al., 2015), and not all such teachers leave. According to the TFA: Greater Delta website, there are currently 500 TFA alumni working in and around the Delta region (Teach For America, n.d.). Moreover, a substantial portion of TFA teachers do not leave the teaching profession but choose to move to schools that they perceive as having better working conditions than their TFA placement schools (Donaldson & Johnson, 2011). A better understanding of teachers' experiences working and living in the Mississippi Delta region is therefore critical to better understanding what drives some teachers to leave and, perhaps more importantly, what conditions encourage other teachers to stay.

Factors Related to Attrition and Retention

The factors underlying attrition and retention are associated with three main employment decisions on the part of teachers. The Schools and Staffing Survey (SASS) and its Teacher Follow-Up Survey (TFS) from the National Center for Education Statistics, which were most recently administered in the 2011-2012 school years, categorize teachers into three groups based on their decisions: stayers, those who remain teaching in their current school; movers, those who continue teaching but in a different school; and leavers, those who exit the profession entirely (Goldring, Tale, & Riddles, 2014). The factors that underpin an individual teacher's decision to stay, move, or leave exert their influence both independently and in interaction with one another. Drawing on ecological systems theory (EST) (Neal & Neal, 2013), these factors may be seen as part of a complex network or ecological environment: "an overlapping arrangement of structures, each directly or indirectly connected to the others by the direct and indirect social interactions of their participants" (p. 727). Each factor that influences attrition and retention exerts its own

force on teachers, but also interacts with other factors. The following discussion highlights the primary factors influencing turnover, as well as how these factors typically interact with one another.

Salary

Consistent with the supply and demand conception of teacher staffing, early studies aimed at examining teacher attrition and retention focused on economic factors related to turnover such as school resources and salary (e.g. Stinebrickner, 2001). Teachers who leave the profession do sometimes cite salary as one motivation for switching careers (Harrell et al., 2004; Hughes, 2012; Inman & Marlow, 2004; Kersaint et al., 2007). Hughes (2012), for example, found in a survey of Arkansas teachers that those who were satisfied with their salary were almost twice as likely to remain in teaching as those who were dissatisfied. Salary and other monetary benefits, such as housing support and loan forgiveness, have been used to recruit and retain teachers in hard-to-staff schools, but these initiatives have typically been unsuccessful. Maranto and Shuls (2012) studied monetary incentives used to draw Arkansas teachers to high-poverty rural schools and found these to be ineffective in promoting retention as, even with such incentives, teachers still earned more if they taught in surrounding districts that were wealthier or less rural. Similarly, in a frequently cited work in the field of teacher retention, Hanushek et al. (2004) conducted a multi-year study of teachers in Texas and found that salary is more likely to factor into decisions to move to other districts than to leave the teaching profession altogether but is less important than factors such as student body characteristics. Hanushek et al. (2004), like Maranto and Shuls (2012), caution against the use of pay for encouraging teachers to remain in schools, particularly those in high poverty areas.

Nonetheless, the use of pay and other monetary incentives remains a common strategy aimed at curbing high rates of teacher attrition (Brill & McCartney, 2008). To determine the extent to which salary could meaningfully increase teacher retention, Feng (2014) conducted a longitudinal study of teachers entering the profession in 1993 with follow-up surveys conducted in 1994, 1997, and 2003, finding that “salary [was] not an important factor in the decision to move to other states or to private schools, but low minority enrollment and higher per-pupil instruction expenditure [were] associated with lower turnover to other states or sectors” (p. 42). Using salary alone to address attrition would be prohibitively costly. Feng’s (2014) simulation demonstrated that it would take a salary increase of at least \$18,000 per teacher per year to retain teachers in schools with what are perceived as more challenging working conditions. Ingersoll (2001) also found that salary had only a small effect on teacher retention and that teachers more frequently cited job dissatisfaction as a reason for leaving. Job dissatisfaction includes not only salary but also working conditions such as student body characteristics and administrative support, which have been shown to be more predictive of turnover than salary alone (Hanushek et al., 2004; Ingersoll, 2001; Johnson et al., 2012; Kersaint et al., 2007). The following sections examine factors related to job satisfaction.

Student Body Characteristics

A significant portion of teacher turnover is due to moving, rather than leaving (Darling-Hammond, 2003; DeAngelis & Presly, 2011; Hanushek et al., 2004; Ingersoll, 2001). In the 2012-13 TFS, 12.5% of teachers were movers while 7.1% were leavers within the first three years of teaching (Goldring et al., 2014). The movement of teachers means that the teacher shortage is not uniform across schools and districts. Indeed, some schools within the same district might have a waiting list for teachers while others struggle to recruit and retain staff

(Ingersoll, 2001). The movement of teachers typically occurs in higher numbers out of high-poverty schools, schools with large numbers of students of color, and both urban and rural schools (Hanushek et al., 2004; Ingersoll, 2001; Johnson et al., 2012; Miller, 2012). Schools with certain student body characteristics, particularly related to race and family income, are therefore disproportionately affected by the teacher shortage, and these student body characteristics are more highly correlated with turnover than teacher salary alone.

The student body characteristics of a school are predictive of teachers' job satisfaction as "teachers may view teaching in schools with high concentrations of minority, poor, and low-performing students as less attractive working environments" (Miller, 2012, p. 20). Analyzing a sample of more than 3,000 beginning teachers' responses on the SASS and TFS, Smith and Ingersoll (2004) found that teachers in high-poverty schools were more likely to leave the profession than teachers in medium poverty-schools but less likely to move to other schools. In a study of about 379,000 teachers in Texas, Hanushek et al. (2004) found that teachers were more likely to leave or move not only if a school had a large number of economically disadvantaged students but also a large proportion of Black or Hispanic students. Similarly, Renzulli et al. (2011) analyzed the 1999-2000 Schools and Staffing Survey data and found that White teachers were more than five times more likely to leave teaching if they worked in majority Black schools than in majority White schools. When analyzing these various studies through the lens of EST and viewing the factors related to turnover as part of a larger ecosystem, student body characteristics and working conditions emerge as discrete concepts that are highly connected. As the next section further explores, higher rates of attrition in high-poverty, high-minority schools are likely due more to perceptions of poorer working conditions in such schools rather than to an inherent quality of the students themselves (Darling-Hammond, 2003).

Working Conditions

While student body characteristics such as race and family income have been shown to be predictive of teacher turnover, Ladd (2011) found that, when controlling for such characteristics, working conditions emerge as a more salient predictor. In a study of Massachusetts public school teachers, Johnson et al. (2012) demonstrate that teachers' perceptions of working conditions more strongly predict job satisfaction than all other aspects of their teaching experience combined, including student body characteristics. One aspect of working conditions that affects retention is the relationships teachers have with one another. Teachers who report strong collegial relationships and similar teaching ideology with fellow teachers are more likely to wish to remain in teaching (Inman & Marlow, 2004; Johnson et al., 2012; Malloy & Allen, 2011, Schlichte, Yssel, & Merbler, 2005). Schools that actively promote high levels of structured, professional collaboration among teachers also tend to have higher rates of retention (Johnson et al., 2012; Malloy & Allen, 2011; Smith & Ingersoll, 2004).

Teachers' perceptions of working conditions are also affected by their perceptions of school leadership. Principal effectiveness has regularly been shown to be a factor driving retention and attrition (Hodges, Tippins, & Oliver, 2013; Johnson et al., 2012; Kersaint et al., 2007; Kukla-Acevedo, 2009; Ladd, 2011; Malloy & Allen, 2007; Simon & Johnson, 2015). Grissom (2011) used the SASS and TFS to examine teachers' perceptions of school leadership, including how leadership provided clear expectations, support, and recognition for good work, and found that small differences in perception had a significant effect on teachers' job satisfaction and decisions to stay, move, or leave. Like working conditions more generally, principal effectiveness interacts with other factors within the larger ecosystem that influences attrition and retention. Given that attrition tends to be higher in what are labeled disadvantaged

schools, Grissom (2011) also found that the influence of principal effectiveness on promoting retention was more substantial in schools with high poverty rates and large numbers of students of color.

Principal effectiveness includes a shared, clearly communicated vision, with stronger shared vision between school leadership and teachers positively affecting teachers' experiences and retention (Hodges et al., 2013; Malloy & Allen, 2007). While Johnson et al. (2012) found that principal effectiveness is only one factor driving attrition and retention, Ladd (2011) found that teachers' views of school leadership, when compared to other factors, were most impactful on their perceptions of working conditions. Kukla-Acevedo (2009) found that first year teachers' decisions to stay, move, or leave were more strongly related to their perceptions of administrative support than the decisions of more experienced teachers. Despite conflicting findings as to the magnitude of principal effectiveness on teacher attrition and retention, research literature consistently demonstrates that school leadership has an effect on teacher satisfaction. Within the ecosystem of factors driving turnover, therefore, school leaders play an important role in influencing teachers' decisions to remain in or leave the profession. Also important, however, are teachers themselves.

Teacher Characteristics

Working conditions, such as relationships with colleagues and school leadership, contribute to teacher characteristics such as feelings of self-efficacy about their teaching ability, with teachers in more supportive environments citing higher self-efficacy and job satisfaction (Moulding, Stewart, & Dunmeyer, 2014; Yost, 2006). In his seminal work on self-efficacy, Bandura (1977) writes: "Efficacy expectations determine how much effort people will expend and how long people will persist in the face of obstacles and aversive experiences" (p. 194). In

other words, theories of self-efficacy suggest that teachers working under traditionally challenging working conditions have lower teaching self-efficacy and, as such, have higher rates of attrition than other teachers. Hanushek et al. (2004), Pedota (2015), Tait (2008), and Yost (2006) all demonstrate that higher teacher self-efficacy has a positive effect on teacher retention. Hughes (2012), however, found that self-efficacy did not have a statistically significant effect on teachers' decisions to remain in the profession, a finding that might be related to challenges with sampling methodology. Hughes (2012) surveyed teachers across Arkansas but acknowledged that teachers in larger schools, at schools with a middling proportion of students on free or reduced lunch, and White teachers were overrepresented in the sample population. Self-efficacy was only one factor analyzed by Hughes (2012) but was a central concept in Yost's (2006) study of teacher retention. Yost (2006) found that teachers with a strong sense of self-efficacy, but who initially worked in what they viewed as challenging school environments, were likely to move to other schools. Thus, promoting self-efficacy can encourage teachers to both remain in the profession and to remain in traditionally hard-to-staff schools, but it is only one component in the larger ecosystem of teacher characteristics that factor into decisions to stay, move, or leave.

Teacher characteristics also include factors external to the direct experience of teaching. The research into attrition regularly shows that attrition is highest among young and inexperienced teachers and those nearing retirement, creating a U-shaped pattern of attrition against age and experience (Guarino et al., 2006; Hanushek et al., 2004; Ingersoll, 2001; Kukla-Acevedo, 2009). At one end of the U, more than one third of new teachers leave the profession within the first three years (Brill & McCartney, 2008; Hallam et al., 2012). Rates of attrition are also affected both by teacher and student race and ethnicity. White teachers are more likely to quit teaching than teachers from other groups (Ingersoll, 2001). Moreover, White teachers are

more likely to leave a school with high Black or Hispanic student enrollment, and teachers who share a racial background with their students are more likely to remain (Hanushek et al., 2004; Simon & Johnson, 2015). Place identity also plays a role in turnover, as research suggests that teachers are more likely to remain teaching in schools near the ones they themselves attended or in community types—urban, suburban, or rural—that are similar to the communities in which they grew up (Boyd, Lankford, Loeb, & Wyckoff, 2005).

Finally, teachers' own academic experiences prior to teaching are predictive of their decisions to stay, move, or leave. Teachers with higher academic accomplishment as measured by SAT or ACT scores are more likely to leave the profession (DeAngelis & Presley, 2011; Feng, 2014; Henke, Zahn, & Carroll, 2001; Podgursky et al., 2004; Stinebrickner, 2001). Similarly, those who attended selective undergraduate institutions are more likely to leave the teaching profession than other teachers, as are those with a graduate degree (DeAngelis & Presley, 2011; Harrell et al., 2004; Podgursky et al., 2004). Teachers with certain undergraduate majors, such as business, mathematics, and engineering, are also more likely to leave the profession than others (Feng, 2014; Henke et al., 2001; Ingersoll, 2001). Not only do teachers' educational backgrounds before entering the teaching profession impact their decisions to stay, move, or leave, so too does the quality of their teacher preparation itself. Darling-Hammond's (2003) frequently cited overview of attrition and retention names inadequate preparation as a major cause for teachers leaving the profession. More recently, Goldhaber and Cowan (2014) confirmed the role of preparation in turnover in a study of 20 teacher preparation programs in Washington state, finding significant differences in retention and attrition rates by program.

TFA Teachers

The quality of preparation received by teachers affects their experience of teaching and decisions to stay, move, or leave not only in traditional certification programs but in alternative-route programs as well (Brenner et al., 2015; Darling-Hammond, 2003; Goldhaber & Cowan, 2014). Alternative-route programs, such as TFA, are one initiative adopted by states and districts to fill teacher shortages (Baines, 2010; Drury & Baer, 2011; Heilig & Jez, 2010). TFA's certification model provides high-achieving college graduates and professionals with initial and on-going professional development across a two-year commitment to teach in a high-need school (Heilig & Jez, 2010; Heineke et al., 2014; Humphrey et al., 2008; Veltri, 2008). Though not the only alternative certification program, TFA is one of the most well-known and controversial, with research demonstrating conflicting results as to the effectiveness of TFA teachers in supporting student achievement and in meaningfully addressing the teacher shortage in hard-to-staff schools (Darling-Hammond et al., 2005; Heilig & Jez, 2010).

Research has consistently shown that teacher attrition is typically higher among TFA teachers than traditionally certified teachers, a condition directly related to the organization's focus on a two-year commitment (Darling-Hammond et al., 2005; Donaldson & Johnson, 2011; Heilig & Jez, 2010; Veltri, 2008). One outcome of the predetermined two-year commitment is that a large proportion of TFA teachers enter with the intention to only teach for two years and then move to graduate school or other careers (Heineke et al., 2014). Despite criticisms that TFA teachers only intend to teach for two years in an effort to strengthen their resumes, Donaldson and Johnson's (2011) study of TFA teachers nationwide found that 43.6% of teachers remained in their original placement schools after two years and 60.5% remained teaching in public schools in general. Mac Iver and Vaughn (2007) found that TFA teachers in Baltimore between

1999 and 2004 had slightly lower rates of attrition than traditional or other alternative-route teachers in the first two years of teaching, though were far more likely to leave after five years (as cited in Heilig & Jez, 2010).

Understanding attrition and retention as a network of factors within an ecosystem illuminates some overlap between characteristics of TFA teachers and characteristics associated with high rates of turnover in the broader teaching force. For example, TFA teachers tend to have high SAT scores and to have graduated from competitive universities, characteristics correlated with lower retention (Baines, 2010; Humphrey et al., 2008). While teacher characteristics help predict their decisions to leave, move, or stay, their decisions are often more complex on an individual level. Individual personal factors, such as other career options, family and romantic relationships, and major life events such as marriage and pregnancy also affect TFA teachers' decisions to leave the profession, often overriding work-related factors such as administrative support and working conditions (Heineke et al., 2014). Even so, these working condition factors affect TFA teachers' turnover decisions just as they affect the decisions of teachers in the broader teaching force.

While TFA teachers most frequently cite professional advancement as a reason for leaving their schools, a large proportion—35% of movers and 18% of leavers—also make reference to challenging working conditions such as lack of collaboration and poor school leadership (Donaldson & Johnson, 2011). Thus, addressing the working condition factors related to turnover can promote retention for all teachers, and for movers in particular. In studies of TFA teachers already in the workforce, supportive working environments and positive perceptions of school leadership encourage these teachers to remain in their teaching placement schools beyond two years (Donaldson & Johnson, 2011; Heineke et al., 2014; Humphrey et al., 2008). Similarly,

effective mentoring has been shown to promote retention, and one of the primary components of the TFA training model is the use of mentors or teacher coaches to provide one-on-one support for teachers throughout the two-year commitment (Baines, 2010).

While researchers like Heineke et al. (2014) show that TFA tends to have up to twice the rate of attrition than the population of traditionally certified teachers, their decisions to stay, move, and leave are influenced by factors similar to those affecting the broader teaching force. TFA teachers are placed in high-poverty schools, which research consistently shows to have higher rates of teacher attrition (Hanushek et al., 2004; Ingersoll, 2001; Johnson et al., 2012; Miller, 2012; Smith & Ingersoll, 2004). Similarly, racial mismatch between teachers and students has been shown to correlate with high attrition (Hanushek et al., 2004; Renzulli et al., 2011), and the majority of TFA teachers do not share a racial background with their students (Veltri, 2008). Donaldson and Johnson (2011) found a higher-than-expected proportion of TFA teachers remained in the profession after the two-year commitment, but many had moved out of their initial placement schools to what were seen as less challenging environments. As such, meaningfully addressing the factors affecting TFA teachers during their two-year commitment could have a positive effect on retention. Given that alternative certification programs like TFA are sometimes used by districts and states in order to address teacher shortages, examining the ways in which attrition of TFA teachers could be limited might help to maintain a teaching force that meets schools' and districts' demand for teachers.

Place

The conceptual framework of EST organizes the complex network of causes and factors within a setting, described as “a set of people engaged in social interaction, which necessarily occurs in, and is likely affected by the features of, a place” (Neal & Neal, 2013, p. 727). As

such, the network of factors that underlie teacher attrition and retention apply to teachers nationwide, but the ways in which these factors impact teachers' experiences differ according to place. Understanding teacher attrition and retention in the Mississippi Delta requires attention to the specificities of rural education and to teaching in the Delta region more specifically. Place is important to consider particularly in relationship to sociological factors affecting attrition, as humans are naturally affected by their places:

People, as beings “in a situation,” find themselves rooted in temporal-spatial conditions which mark them and which they also mark. They will tend to reflect on their own “situationality” to the extent that they are challenged by it to act upon it. Human beings *are* because they *are in* a situation. (Freire, 2006, p. 109)

This section aims first to describe the unique conditions affecting rural educators, then attrition and retention within the rural context, and finally the context of the Mississippi Delta.

Rural Education

Rural teachers face challenges unique to their contexts, including lack of access to goods and services, geographic, professional, and social isolation, higher poverty rates, and lower teacher salaries than other regions (Arnold, Newman, Gaddy, & Dean, 2005; Azano & Stewart, 2015; Beesley, Atwill, Blair, & Barley, 2010; Burton, Brown, & Johnson, 2013; Hammer, Hughes, McClure, Reeves, & Salgado, 2005; Harrell et al., 2004; McClure & Reeves, 2004; McCoy, 2006; Miller, 2012; Monk, 2007). The awareness of being rural affects the experience of rural educators, as they are “influenced by dominant cultural ideas about isolation, distance and size, and what it means to be a teacher in a rural context” (Walker-Gibbs, Ludecke, & Kline, 2015, p. 81). Some benefits associated with teaching in a rural context, such as smaller class sizes, often pose additional challenges for teachers rather than advantages, as rural teachers are

often required to teach more than one grade level or subject area without additional training or compensation (Eppley, 2009; Jimerson, 2005; Monk, 2007). Teachers tend to assign more weight to the factors of rural teaching they view as disadvantages rather than advantages, and while some rural teachers enjoy their work, others leave shortly after entering their classrooms (Monk, 2007).

The research literature demonstrates conflicting evidence when examining teacher attrition and retention in rural schools. Some researchers, such as Ingersoll (2001) and Kukla-Acevedo (2009), have shown that rural rates of turnover are lower than suburban and urban rates. Feng (2014), who used an economic framework to assess turnover, also found that rural teachers were less likely to quit their jobs, positing that higher retention was a result of fewer job opportunities in rural areas. More often, however, studies demonstrate that rural schools in certain regions have difficulty staffing their schools and experience higher rates of turnover, particularly as compared with suburban schools (DeAngelis & Presley, 2011; Hammer et al., 2005; Maranto & Shuls, 2012; Miller, 2012; Monk, 2007; Nichols, 2004). Research that compares rural and urban teachers has yielded different results. Some studies find similar rates of attrition across the two groups (Ingersoll, 2001; Miller, 2012), while in a study of teacher attrition across four years in a Midwestern state, Haun and Martin (2004) found a 17% rate of attrition among rural teachers as compared to a 4% attrition rate among urban teachers. Despite the conflicting findings about rates of turnover in rural schools as compared to other schools, Beesley et al. (2010) suggest that vacancies can negatively affect rural schools more than urban or suburban ones: “If a math teacher leaves, for example, there may be no math department until another teacher is hired” (p. 1). Moreover, rural schools are affected by movers, as opposed to

leavers, at rates higher than urban schools, with rural teachers often choosing to remain teaching but in a different community type (Miller, 2012).

This lack of consistency in the literature around rural teacher turnover can in part be attributed to the fact that rural places often have widely different characteristics from one another (Monk, 2007). McClure and Reeves (2004), for example, note that rural schools nearer to suburban areas are likelier to attract teachers than schools that are more geographically isolated, though they also experience high rates of turnover. In a review of rural education research literature, Burton et al. (2013) make the following criticism: “many studies were situated in rural settings as a matter of happenstance rather than as a deliberate exploration of the context of the rural schools” (p. 3). When considering the problem of high attrition, Monk (2007) asserts the need to “focus on a subcategory of what might be called hard-to-staff rural schools, rather than a blanket set of policies for all rural schools” (p. 155).

Contributing to the lack of consistency in findings, the factors uniquely affecting rural teacher attrition and retention have yet to be fully examined, because issues in rural education tend to be underrepresented within the larger field of education research. The dearth of scholarly attention in the field is stated as a challenge by authors aiming to synthesize research about teacher retention and attrition in rural regions, such as Arnold et al. (2005) and McClure and Reeves (2004). Despite the fact that in 2007 25% of American public school teachers worked in a rural school (Drury & Baer, 2011), “rural education research has been misunderstood, underfunded, unencouraged and, taken as a whole, the resulting collection of work has suffered for it, according to many observers” (Sherwood, 2001, p. 159). One challenge facing rural education research is differences in the definition of rural (Arnold et al., 2005; Miller, 2012).

Monk (2007) defines rural through both a description of common characteristics of such regions as well as the inherent challenges in defining them:

Among the inherent characteristics are small size, sparse settlement, narrowness of choice (with regard, for example, to shopping, schools, and medical services), distance from population concentrations, and an economic reliance on agricultural industries, sometimes in tandem with tourism.... [N]ot all of these essential characteristics necessarily apply to each rural community. (p. 156)

Understanding teacher attrition within a rural setting therefore necessitates attention to the specificities and context of the place in question.

The Mississippi Delta

While meaningful rural education research would generally be supported by attention to place and context, authors such as Hodges et al. (2013), McCoy (2006), and Morris and Monroe (2009) demonstrate the need to focus attention on the specificities of the rural Deep South in particular. The lasting effects of slavery, Jim Crow, and the Great Migration are still felt in many Southern public schools, including through continued racial segregation, teacher shortages, and comparatively low student achievement levels (Adams & Gorton, 2006; Burton & Johnson, 2010; Clotfelter, 2004; Hodges et al., 2013; Morris & Monroe, 2009; Tillman, 2004). The history, demographics, and geography of the region particularly influence the experiences and achievement of students in majority-Black public schools, yet “most contemporary educational and social science studies ignore the South as a critical racial, cultural, political, and economic backdrop in Black education” (Morris & Monroe, 2009, p. 21). The rural Deep South’s high poverty rates, high proportion of African American students, and high dropout rates contribute to

the region's schools' struggle to recruit teachers, and vacancies due to attrition often remain unfilled (Hodges et al., 2013).

The Mississippi Delta is one such rural region that has faced challenges from teacher shortages and difficulties in retaining teachers (McCoy, 2006; Moore, 2011). The Mississippi Delta, the region spanning the alluvial plain of the Mississippi River, is a high-poverty, agricultural region with a unique historical and cultural context (Adams & Gorton, 2006). Mississippi Delta schools did not desegregate until 1969 when the Supreme Court ruled in *Alexander v. Holmes County Board of Education* that schools in Holmes County, Mississippi and throughout the country had not adhered to the 1954 ruling in *Brown v. Board of Education* and were ordered to desegregate immediately (Clotfelter, 2004). With Black teachers now in front of both Black and White students, many schools in Mississippi actively worked to displace Black educators, with White teachers receiving preference for positions (Fairclough, 2004; Haney, 1978; Polidore, Edmonson, & Slate, 2010; Tillman, 2004). White teachers were therefore teaching majority Black student populations in the newly resegregated public schools, whereas previously the public schools had been central to Black community life and run by members of the Black community (Fairclough, 2004; Polidore et al., 2010; Tillman, 2004). Schools rapidly resegregated, however, largely through the creation of hastily organized private schools for White students (Clotfelter, 2004). These private schools contributed to racial segregation in 1999-2000 at rates similar to those at the time of their founding three decades prior (Clotfelter, 2004). Just as racial segregation continues to be one of the notable characteristics of Mississippi Delta schools today, schools in the region are also typified by high rates of poverty, disproportionately low student achievement, and difficulty with staffing teachers (Al-Fadhli &

Singh, 2010; McCoy, 2006). As one teacher in an ethnographic study of educators in the region told McCoy (2006), “No one qualified wants to live here” (p. 758).

The use of legal corporal punishment in Mississippi Delta schools acts as a helpful case study in illustrating the challenging interactions of poverty, race, and students’ and teachers’ experiences of schooling. More than half of Mississippi’s students attend a school that uses some form of corporal punishment, a larger proportion of students than in any other state, and when physical punishment is administered it is most commonly through the use of paddling (Carr, 2014; Sparks & Harwin, 2016). Nationwide, Black students are significantly more likely to receive corporal punishment than other students, as are students in rural areas and those who live in poverty (Han, 2011; Sparks & Harwin, 2016), all factors that describe the majority student population of the Delta’s public schools. In 2012, for example, Black students made up 64% of those paddled in Mississippi schools, though only about one third of the state’s population is Black (Carr, 2014). In Grenada County, a more racially integrated public school system in the context of Mississippi, 10% of White students and 23% of Black students at Grenada Elementary School received physical punishment in the 2013-2014 school year (Sparks, 2016). Dupper and Dingus (2008) link corporal punishment to lower academic achievement, challenges with social competence, higher rates of violence, and other physically, psychologically, and emotionally negative outcomes for students. Despite the long-term negative effects of the use of corporal punishment in Delta schools on local Black communities, however, many of the practice’s most vocal proponents are from within that community itself (Carr, 2014). Anti-corporal punishment efforts have made little traction as parents and community members often see the practice as biblically mandated, a rite of passage, or a “kind of cultural legacy that should be passed on to their own children” (Carr, 2014, para. 41). The continuing practice of corporal punishment in the

Delta highlights the complicated intersections of race, culture, community, and history that influence the experiences of teachers and students in the region's schools. The use of corporal punishment is decreasing in the region, however, and Carr (2014) attributes part of this decline to the recruitment of teachers from programs like TFA: "The recruitment of younger teachers through alternative programs like Teach for America has contributed to the decline, because they are far less likely to embrace corporal punishment" (para. 18).

TFA in the Mississippi Delta

The teacher shortage in the Mississippi Delta has caused schools in the region to increasingly turn to TFA teachers, in some ways replicating the preferencing of teachers from outside the local Black community that occurred during desegregation, though for different reasons:

Today, students in the predominantly African American schools in the Mississippi Delta are most likely to have the least stable teaching force. This has been a chronic teacher shortage area for more than twenty years: to meet their staffing needs, many schools rely heavily on extended substitutes or temporary instructors from programs such as Teach For America. Meanwhile, hundreds of Mississippi's aspiring African American teachers, most of them products of these under-resourced schools, are unable to meet the mandated cut scores on the state's licensing exams. (Moore, 2011, p. 182)

Most TFA teachers are not from the region in which they are placed (Veltri, 2008), and the same is true in the Mississippi Delta (see Chapter 2). Teachers tend to prefer teaching near the area in which they grew up (Boyd et al., 2005), and in the Mississippi Delta teachers often also face outside pressure from an aspect of regional culture described as "factionalism": "Examples of this include prejudices against non-kin, other ethnic groups, and other geographically identified

groups such as town, neighborhoods, the ‘other side of the railroad tracks,’ and all outsiders” (Hyland, 2008, p. 158). The feeling of being an outsider has been shown to contribute to turnover among TFA teachers in other regions of the country (Veltri, 2008). With the added cultural component of factionalism in the Delta, TFA teachers’ feelings of being outsiders likely contribute to high attrition rates. Factionalism plays a role even in the hiring of teachers by school administrators. In a descriptive study of hiring interview practices in rural school districts in the Ozark Plateau and the Mississippi Delta, Nichols (2004) found that teachers were rarely asked questions about teaching philosophy and instead were asked more personal questions, such as about church attendance or family connections. Given that teachers’ perceptions of school leadership has been shown to be correlated with turnover (Grissom, 2011), interactions such as these that remind teachers of their outsider status could have a negative effect on retention.

Racial identity further adds to the perception of newcomers as outsiders. Many Delta counties are majority Black, and social relationships in the Delta remain largely organized along racial lines (Adams & Gorton, 2006; McCoy, 2006). These relationships extend to the public schools, where majority-White TFA teachers (Veltri, 2008) work alongside a majority-Black force of local teachers and majority-Black student bodies (Al-Fadhli & Singh, 2010; McCoy, 2006; Moore, 2011). If racial mismatch has been shown to drive turnover (Hanushek et al., 2004; Renzulli et al., 2011), then the effects of mismatch are likely to be magnified within the culture of the region’s schools. Teachers in Mississippi Delta schools tend to be highly aware of racial differences and have feelings of mistrust across racial lines that often limit collegial relationships and professional collaboration (McCoy, 2006; Polidore et al., 2010). Racial differences between teachers and students are pronounced in this highly segregated society, for as one non-TFA Delta teacher described it, “Race is a problem for me because I am White in an

all-Black school. Kids do not respond to me. I can't connect. I'm not part of this" (McCoy, 2006; p. 754). Furthermore, teachers in the Delta tend to report difficult relationships with administrators, lack of support and feelings of deprofessionalization, and often typify the culture of schools as being one of low expectations (McCoy, 2006). Given that teacher characteristics, student body characteristics, and working conditions such as collegial relationships and administrator effectiveness have all been shown to affect attrition and retention, teaching as an outsider in a Mississippi Delta school is a challenging experience for many teachers, potentially driving high rates of turnover.

Despite the challenges faced by alternative-route teachers including TFA teachers in the Mississippi Delta, such teachers are viewed by principals as a necessary force in combatting the teacher shortage in the region (Brenner et al., 2015). As long as the number of local entrants to the teaching profession remains low, retaining current teachers in classrooms in higher numbers is critical to slowing the growth of the teacher shortage. Increasing the proportion of TFA teachers who remain in Mississippi beyond the two-year commitment could address the perception of TFA teachers in Mississippi as "temporary instructors" (Moore, 2011, p. 182) and contribute towards a longer-term solution for the region's difficulties with recruiting and retaining a stable teaching force. According to the TFA: Greater Delta website, there are currently 200 TFA teachers in classrooms and another 500 alumni working in the region (Teach For America, n.d.). While these teachers alone will not solve the region's teacher shortage, retaining TFA teachers in the region's schools could provide a meaningful, positive contribution to lessening the teacher shortage and narrowing the "holes in the bucket" (Ingersoll, 2002). Given the demonstrated dearth of literature in rural education, including rural teacher turnover, a deeper understanding of attrition and retention in the Mississippi Delta could suggest potential

solutions aimed at addressing the teacher shortage within that region and in rural schools more broadly. The following chapter describes a needs assessment conducted with TFA teachers in rural Mississippi Delta school to better understand the specific causes and factors driving their decisions to leave, move, or stay.

Chapter 2

Empirical Examination of Underlying Causes and Factors

In order to better understand TFA teacher attrition and retention in the Mississippi Delta, a needs assessment was conducted by the author to empirically examine the causes and factors driving teachers' decisions to stay, move, or leave. This needs assessment sought to identify the ways in which experiences of TFA teachers in rural Mississippi correlate with factors driving attrition and retention identified in the broader research literature. TFA teachers in the Delta are placed in schools that are disproportionately affected by the teacher shortage (Teach For America, n.d.), and the experiences and needs of teachers in these schools must be addressed in order to minimize the negative effects of high teacher attrition.

Context of the Study

The needs assessment focused specifically on TFA teachers in their second year of teaching in the rural Mississippi Delta at during the 2015-2016 school year. These teachers were placed by TFA in 49 different schools across 18 districts in the Delta region. The variety of school placements meant that teachers had a range of experiences across the two-year commitment to TFA that might have influenced their decisions about staying, moving, or leaving. All schools, however, shared the characteristics of having a majority of students receiving free or reduced lunch and Black student populations at rates of 90% or higher. Teachers came from a variety of racial, economic, regional and educational backgrounds, and some were career changers rather than recent college graduates. Regardless of background, all teachers received on-going training and support from a regional TFA team in order to receive their Mississippi teaching licenses. The researcher had professional relationships with teachers in the study samples through being a member of the team responsible for training and support

across the two years of teaching. This needs assessment was designed to understand the causes and factors that led some teachers to leave the profession, some to move to teach in other regions, and others to stay in their placement schools in spite of a fairly standardized arc of training and development provided to teachers within the target population.

Research Questions

To describe the factors leading to attrition and retention in the context described above, the research questions addressed by the needs assessment study were:

1. What proportion of TFA teachers finishing their two-year commitment in rural Mississippi Delta schools were staying in their placement schools, moving to teach elsewhere, or leaving the teaching profession?
2. How are the factors associated with teacher attrition and retention throughout the broader literature reflected in the experiences of TFA teachers in rural Mississippi Delta schools?
3. To what extent do teachers' experiences of these factors relate to their decisions to stay, move, or leave?

Methodology

The following section describes the research methodology used to address the research questions related to this needs assessment study.

Participants

Data were collected from 83 teachers who joined TFA Mississippi in the fall of 2014 and were finishing their two-year commitment in the spring of 2016. Of the 83 participants, 73 were included in the sample used for survey analysis. The other 10 were omitted because they lived and worked in Jackson, Mississippi, an urban center, rather than in the Mississippi Delta region. The 73 teachers taught in elementary, middle, and high schools spread across 18 rural school

districts in Mississippi. Participants included 54 females and 19 males between the ages of 22 and 56, with a median age of 24. Participants came from a variety of racial and ethnic backgrounds, with 49 identifying as non-Hispanic White, 19 as Black or African American, 2 as Hispanic or Latinx, 2 as multi-racial or multi-ethnic, and 1 as Asian American or Pacific Islander. Participants grew up in a range of regional backgrounds and community types within and outside the United States, including 19.2% rural, 53.4% suburban, and 27.4% urban. No participants grew up in Mississippi, and 66% grew up outside of the Southeast. Finally, 72.6% of participants held a bachelor's degree, 17.8% had completed some postgraduate coursework, and 9.6% held a master's degree.

Measures and Instrumentation

The factors assessed in this descriptive study were measured using teachers' responses to a survey (see Appendix A). The primary dependent variable measured was turnover, defined as participants' intentions to stay, move or leave. Participants quantified their likelihood of staying on a five-point Likert-type scale and described their decision in more detail in response to an open-ended question asking about their intended plans for the fall of 2016.

Additional qualitative data were collected through demographic questions and Likert-type and open-ended questions to determine the extent to which various factors affected the dependent variable. Stronger content validity was established by covering the range of factors linked to teacher turnover described in the literature review. The independent variables measured included teachers' demographic information, perceptions of school leadership, primary social ties, and perceptions of living and working in Mississippi. Demographic information was collected using an open response question for age and multiple-choice responses for educational, racial, and regional backgrounds. Perceptions of school leadership were determined by rating

relationships, administrative support, and alignment of beliefs about education on five-point Likert-type scales and providing additional information in open responses. Social ties were measured through multiple choice questions. Teachers' perceptions of the advantages and disadvantages of living and working in rural Mississippi were determined through open response questions.

Data Collection Methods

Data were collected to gather qualitative information about teachers' perceptions of their experiences living and teaching in rural Mississippi and their decisions about staying in their placement schools, moving to other schools, and leaving the teaching profession. Data were gathered during teachers' final online, synchronous professional development course of the 2015-2016 school year. Participants were asked to complete an online survey hosted by Google Forms, a free survey hosting service. The survey took approximately 10 minutes to complete and consisted of a combination of 35 multiple choice, Likert-type scale, and open response questions. Teachers also read about the study context and provided the consent required before they were able to access to the survey questions (see Appendix A).

Data Analysis Procedures

Once surveys were completed, data were exported from Google into a Microsoft Excel spreadsheet. Data were cleaned for consistency. For example, some teachers' responses to the communities in which they live were renamed, such as the response "Greenwood, MS" being converted to simply "Greenwood." Teachers' responses to the question "In your own words, describe your plans for what you will be doing in the fall of 2016" were coded into three categories measuring the variable of turnover: staying, moving, and leaving. These categories were chosen in accordance with those used in the SASS and TFS (Goldring et al., 2014). In

order to determine which factors were most related to each of these three conditions of turnovers, pivot tables were produced in Excel in order to provide an overview of the relationship between turnover and responses to demographic, multiple choice, and Likert-type scale questions. These tables provided descriptive information about the proportion of teachers within each turnover category who selected each response to the questions asked. Open response questions about perceived advantages and disadvantages of living in rural Mississippi were coded to find common themes using a grounded coding approach in which themes emerged from analysis of survey responses. These common themes helped to establish theories about the primary drivers of attrition, using an approach of inductive reasoning. In order to generate a more solid theory, a staff member for TFA also read and coded open responses to establish inter-coder reliability. Quantitative data were also exported to SPSS for descriptive statistical analysis, primarily of turnover decisions and sample population demographic information.

Findings and Discussion

Findings indicated that TFA teachers had high rates of attrition out of the region's schools, but were not necessarily leaving the teaching profession itself, and that their turnover decisions were influenced by factors similar to those described in the research literature (see Appendix B). Key findings from initial data analysis were as follows:

- 27.4 % of teachers were stayers, 43.8% were movers, and 28.8% were leavers.
- Teachers who described feeling like outsiders in their communities along lines of race or sexual orientation were more likely to be leavers or movers than stayers.
- Teachers with more positive perceptions of school leadership and administration were stayers in larger numbers than teachers with more negative perceptions.

- Teachers' descriptions of the advantages and disadvantages of living and working in rural Mississippi reveal trends related to turnover consistent with those described in the research literature.
- Teachers in each group (70% of leavers, 87% of movers, and 79% of stayers) cite geographical or social isolation as disadvantages of living and working in rural Mississippi.

Data analysis revealed that a majority of teachers (71.2%) were planning to continue teaching in the fall of 2016, though not all in rural Mississippi (see Figure B1). A similar percentage of respondents identified themselves as stayers (27.4%) and leavers (28.8%). The largest proportion of teachers identified themselves as movers (43.8%). Movers were choosing to move to schools outside the state, rather than to other schools within the state of Mississippi. Movers were often moving to be closer to family or a significant other (37.5% of movers) or were moving to teach in an urban center near Mississippi such as Nashville or New Orleans (28% of movers). The high proportion of movers correlates with findings that many TFA teachers remain in the profession but not in their placement schools (Donaldson & Johnson, 2011), and that movement disproportionately affects disadvantaged schools (Hanushek et al., 2004), such as those in the Mississippi Delta. Similarly, the rationale provided by movers supports Boyd et al.'s (2005) finding that teachers prefer to work in communities similar to or near those in which they grew up.

Despite the high proportion of teachers leaving or moving, however, a majority were satisfied that they had decided to teach and live in Mississippi for their two-year commitment, with a mean of four and a mode of five on a five-point Likert-type scale from "very dissatisfied" to "very satisfied." Given such high turnover in the form of both movers and leavers in spite of

high satisfaction across all groups, a better understanding of the experiences that might correlate with attrition is an important next step to retaining more teachers in the future. The following discussions describe findings from needs assessment analysis that relate to major factors correlated with teacher attrition as described in the research literature. These include teacher characteristics, perceptions of working environment including school leadership, and factors specific to the experiences of teaching in the Mississippi Delta context.

Teacher Characteristic Factors

Analyzing demographic information revealed similarities between teacher responses and the literature around teacher characteristics and turnover. For example, in the broader teaching force, teachers with high educational attainment such as through holding a graduate degree tend to leave the profession at higher rates than other teachers (Harrell et al., 2004). In the TFA context, though only a small proportion of surveyed teachers held master's degrees, only 14% of such teachers were stayers. Racial identity also related to differences in turnover (see Table B1). No teachers who identify as anything other than White or Black were stayers, possibly related to feelings of isolation related to the factionalism and Black/White racial context of the region (Adams & Gorton, 2006; Hyland, 2008). White teachers were more likely to be movers than Black teachers at a rate of 49% as compared to 26%. This discrepancy is consistent with the literature findings that White teachers are more likely to leave schools with high Black student enrollment (Hanushek et al., 2004), such as the schools of the Mississippi Delta where social institutions are very much segregated along Black and White racial lines (Adams & Gorton, 2006; McCoy, 2006). Teachers from all racial groups mentioned lack of diversity as a disadvantage of working in the rural parts of the state. Though teachers were not explicitly asked a demographic question about sexual orientation, four self-identified as lesbian, gay, or bisexual,

and these teachers described that feeling like an outsider and lack of diversity were disadvantages in their work. Though race and sexual orientation both emerged as factors relevant to the issue of turnover, they are outside of the control of TFA staff in terms of teacher selection. These factors do, however, interact within the network of other factors driving attrition and are worth noting in this discussion.

The type of community in which teachers grew up (rural, suburban, or urban) had a small relationship with turnover. Trends in place background related to leaving, moving, and staying were consistent with the larger study population, except that teachers from an urban background were more likely to be leavers and less likely to be movers than the sample total (see Table B2). This higher rate of urban leavers relates to Boyd et al.'s (2005) finding that teachers tend to prefer teaching in communities similar to those in which they grew up. Again, teacher background is outside the scope of an intervention but remains an important factor to consider as it likely interacts with others and contributes to teachers' descriptions of isolation in the rural context.

Working Condition Factors

The data also revealed connections between teachers' perceptions of their school leadership and their choices to stay, move, or leave. In responding to five-point Likert-type scale questions, more than half (55%) of teachers who gave a five ranking to their relationship with administrators were staying in their placement schools, while no teachers who gave a one ranking were staying. One mover who ranked administrative relationships as "very weak" stated, "The administration at my school is very unorganized and all around unprofessional. There is a lack of simple communication skills that would truly make a difference in the school if it were to become better. I, like most teachers in the school, do not feel respected or

appreciated.” Similarly, 46% of teachers who ranked administrative support as a five were staying, while fewer than 25% who gave it a low ranking were staying. One stayer, who ranked administrative relationships as “very strong” in all relevant questions, wrote, “They will support me (the teachers) with whatever I need to teach successfully. This includes resources/training, as well as support when it comes to discipline. They will push the students and not let them opt out for any reason. They work to build the students into proper people/citizens (beyond academics).” These responses align with trends in the research literature that show the strong relationship between teachers’ perceptions of school leadership and attrition and retention (Hodges, et al., 2013; Johnson et al., 2012; Kersaint et al., 2007; Kukla-Acevedo, 2009; Ladd, 2011; Malloy & Allen, 2007; Simon & Johnson, 2015)

In open response questions, teachers with negative perceptions of school leadership regularly cited lack of support, focus on testing, and disciplinary policies as negatively influencing their experiences during the two-year TFA commitment. Corporal punishment in particular emerged as a trend relevant to teachers’ decisions to stay, move, or leave. Questions about discipline were not explicitly included in survey questions, yet 20% of leavers and 29% of movers named corporal punishment in their open responses. As one mover wrote, “We have corporal punishment and the ‘sit down and shut up’ mantra seems to be status quo.” Another mover wrote, “I disagree with the use of corporal punishment to handle every behavior issue that arises.” These unprompted responses relate to Carr’s (2014) assessment that TFA teachers are less likely to be supportive of the use of corporal punishment in schools. No stayers mentioned corporal punishment in any of their responses. Not all schools represented in the study sample use corporal punishment, so this disparity in responses across groups suggests that stayers who did not mention the practice were either placed in schools that did not use corporal punishment

or did not mind its use if it was part of school practices. Despite a lack of research literature into the relationship between corporal punishment and teacher attrition, the negative effects of corporal punishment on students (Dupper & Dingus, 2008) illustrate a likelihood that corporal punishment is associated with less desirable working conditions. Teachers' perceptions of working conditions have been shown to relate to overall job satisfaction and decisions to stay, move, or leave (Johnson et al., 2012; Ladd, 2011).

Place Factors

Open responses revealed valuable information in understanding the effect of the rural context on teachers' perceptions of their experiences working in the Delta. Using a grounded approach to analysis of qualitative data, several common themes emerged from teachers' descriptions of perceived advantages and disadvantages of living in rural Mississippi. Advantages could be categorized as: community, mission, natural beauty, cost of living, students, personal growth, Mississippi culture, and history. Disadvantages could be categorized as: social isolation, geographical isolation, race relations, working conditions, lack of resources, salary, political climate, and cultural differences. The cost of living factor was frequently identified in a positive context, though at different rates across groups, with 40% of leavers, 29% of movers, and 26% of stayers citing cost of living as one of the top three advantages of living in the state. The fact that leavers were the group most frequently citing cost of living relates to literature demonstrating that salary and other monetary incentives are insufficient to promoting teacher retention in challenging working environments (Feng, 2014; Hanushek et al., 2004; Maranto & Shuls, 2012).

Another commonly cited advantage of living and working in Mississippi was the opportunity to work towards a mission of social justice and educational equity. Sense of mission

was described by 37% of stayers and 32% of movers as an advantage of living and working in Mississippi, while only 5% of leavers mentioned advantages related to mission. One stayer described advantages as “amazing local culture; wonderful students; being in the thick of change.” The advantages described by this stayer illustrate the ways in which place context, relationships that contribute to a positive working environment, and sense of mission can have a strong influence on staying. By contrast, when asked about the advantages of living and working in Mississippi one mover wrote, “NONE.”

Across all groups, a majority of teachers cited social or geographical isolation as a disadvantage of living and working in the state, with 70% of leavers, 87% of movers, and even 79% of stayers citing one or both forms of isolation. Isolation took many forms, with teachers describing the challenges of being away from friends, family, and significant others, a lack of things to do on the weekend, and being far away from shopping, restaurants, and high-quality health care. Teachers’ descriptions of challenges related to isolation are similar to Monk’s (2007) description of challenges common to teaching in rural communities: “small size, sparse settlement, narrowness of choice (with regard, for example, to shopping, schools, and medical services), [and] distance from population concentrations” (p. 156). As one teacher wrote in describing the top three disadvantages of living in the state: “1. Isolation for myself 2. Isolation for my students 3. Isolation.”

Conclusions

Analysis of teacher survey responses revealed that teachers’ perceptions of their experiences were related to their decisions to stay, move, or leave. Teacher demographic characteristics such as racial and regional background were related to turnover in ways that largely align with findings in the broader research literature. For example, White teachers were

more likely to be movers than teachers from other racial backgrounds. When considering an intervention aimed at increasing TFA teacher retention in the rural Mississippi Delta, however, demographic characteristics such as race cannot be modified. Instead, these characteristics act as moderator variables that influence teacher turnover. Variables that represent factors related to turnover that could be addressed through an intervention thus emerged not through descriptive analysis of demographic information but through coding and qualitative analysis of teachers' responses to open-ended questions.

Dominant themes in survey responses included perceptions of school leadership, working conditions, and isolation. Of these, isolation was most frequently cited by teachers from all groups as a disadvantage of living and teaching in the Delta. Isolation therefore emerged as one primary factor driving high rates of attrition among TFA teachers in the Mississippi Delta. Differences in teacher responses about advantages of working in the region provide insight into potential interventions to promote retention. For example, the majority of teachers cited isolation as a disadvantage, but teachers who strongly felt a sense of mission in their work seemed more willing to stay in the face of such isolation. This needs assessment reveals that an intervention aimed at increasing teacher retention in the Mississippi Delta ought to address factors related to teacher attrition that emerge in both the research literature and survey findings, such as perceptions of school leadership and working conditions, and factors more specific to place that emerged in analysis of survey responses, such as isolation.

Chapter 3

E-Mentoring as an Intervention to Support Rural Teacher Retention

Multiple factors contribute to teacher attrition across the United States, including salary (Darling-Hammond, 2003; Harrell et al., 2004; Hughes, 2012; Inman & Marlow, 2004; Kersaint, et al., 2007; Stinebrickner, 2001), school location (, 2014; Hughes, 2012; Monk, 2007; Simon & Johnson, 2015), and teacher perceptions of working conditions such as discipline, administrative support, and collegial relationships (Darling-Hammond, 2003; Grissom, 2011; Hanushek et al., 2004; Harrell et al., 2004; Hughes, 2012; Kersaint et al., 2007; Kukla-Acevedo, 2009; Ladd, 2011; Renzulli et al., 2011; Simon & Johnson, 2015). Within the rural Mississippi Delta context, additional factors such as the continued racial segregation of schools, mistrust of outsiders, and feelings of isolation further drive teacher attrition (Hyland, 2008; McCoy, 2006; Polidore et al., 2010; Walker-Gibbs et al., 2015). A needs assessment was conducted to determine which of the factors that contribute to attrition were most prominent in the decision-making process about staying or leaving in the classroom among TFA teachers in Mississippi (see Chapter 2).

Summary of Needs Assessment Findings

A survey of TFA teachers completing their two-year commitment in the Mississippi Delta was conducted as part of a needs assessment seeking to understand which factors associated with attrition and retention are most impactful in driving turnover in the region. Analysis of survey responses revealed trends that aligned with literature about teacher turnover in a few ways. The following section highlights key findings from the needs assessment, connections to relevant literature, and factors from both that reveal opportunities to be addressed in an intervention aimed at increasing TFA teacher retention in the Delta.

In the needs assessment, 49% of White TFA finishing their two-year commitment were moving to teach in another region the following year, while only 26% of Black teachers were categorized as movers. In the Mississippi Delta, social institutions are very much segregated along Black and White racial lines (Adams & Gorton, 2006; McCoy, 2006), so the high rate of White movers is consistent with literature findings that White teachers are more likely to leave schools with a large proportion of Black students (Hanushek et al., 2004). Administrative support was another area in which needs assessment findings revealed trends similar to those in the research literature. Responses related to principal effectiveness aligned with Grissom's (2011) findings that the effects of principal effectiveness are more substantial in schools with high-poverty rates and a large proportion of students of color. On a five-point Likert scale, 46% of teachers who ranked administrative support as "Very Strong" planned to stay in their placement schools beyond the two-year TFA commitment, while fewer than 25% who ranked administrative support as "Weak" or "Very Weak" planned to stay.

The needs assessment revealed that factors related to teaching in the rural Mississippi Delta were more commonly reported drivers of attrition than characteristics of the teaching profession itself. The largest proportion of surveyed teachers (43.8%) was moving to teach in schools outside of the region as compared to teachers leaving the profession entirely (28.8%). When asked to describe the disadvantages of teaching in the Mississippi Delta, almost all teachers mentioned isolation, with teachers describing the challenges of being away from friends, family, and significant others, a lack of things to do on the weekend, and being far from shopping, restaurants, and high quality health care. As one teacher wrote in describing the top three disadvantages of teaching in the state: "1. Isolation for myself 2. Isolation for my students 3. Isolation."

Support for Intervention

Several options exist to promote higher rates of TFA teacher retention, including salary incentives (McClure & Reeves, 2004), grow-your-own initiatives in which people from the local population are supported through the process of teacher certification (McClure & Reeves, 2004; Monk, 2007), and e-mentoring of teachers (McClure & Reeves, 2004; Monk, 2007; Quintana & Zambrano, 2014; Watson, 2006). While rural teachers typically earn smaller salaries than their urban and suburban counterparts, the cost of off-setting the challenges of teaching in schools such as those of the rural Mississippi Delta is prohibitively costly (Feng, 2014), and salary initiatives aimed at promoting retention in other rural areas have been largely ineffective (Maranto & Shuls, 2012). Furthermore, teachers in the needs assessment who discussed money as an existing advantage of teaching and living in Mississippi were more likely to be leavers than those in other groups. This finding suggests that salary incentives would likely be insufficient in encouraging more teachers to stay in the region. Grow-your-own initiatives, which recruit teachers who are from the communities in which they will teach, have shown promise for longer-term retention (McClure & Reeves, 2004; Monk, 2007). Challenges posed by grow-your-own initiatives include a high cost of implementation in an underfunded state education system and a scarcity of local people interested in education who are able to pass testing requirements for teacher certification (Brown, 2016; Hall, 2016). A grow-your-own initiative could be a strong long-term solution to the state teacher shortage, but the steps necessary to create such an initiative are outside the current scope of work conducted by TFA. E-mentoring, or mentoring conducted through the use of virtual technologies, is a more practical, short-term option for promoting retention of TFA teachers in the Mississippi Delta, with research consistently demonstrating the effectiveness of mentoring generally (e.g. Smith & Ingersoll, 2004) and

through the use of online technology to transcend distance in rural areas (Quintana & Zambrano, 2014).

Factors driving attrition within both the research literature and needs assessment include racial mismatch between teachers and students, teachers' perceptions of working conditions and of their school leadership in particular, and social isolation (Hanushek et al., 2004; Ladd, 2011; Minarik, Thornton, & Perreault, 2003). Each of these factors includes a relational element, including relationships with students, administrators, colleagues, and community members. Therefore, this literature review focuses on e-mentoring as an intervention aimed at promoting stronger relationship networks for teachers, which might therefore improve perceptions of working conditions, support teachers' integration into the community, and limit teachers' feelings of isolation. Additionally, the needs assessment revealed that teachers' feelings of connection to the mission of TFA in Mississippi was related to a greater likelihood of staying. An e-mentoring initiative that matches teachers with a mentor who has remained in the region beyond the two-year commitment could help teachers feel connected with others who have a strong sense of mission, thus supporting a choice to stay.

This chapter first proposes some theoretical foundations that illustrate the need for an intervention that addresses a range of interacting internal and external factors that influence teachers' decisions to stay or leave their jobs teaching the Mississippi Delta. Next, it synthesizes literature demonstrating the effectiveness of mentoring for strengthening teachers' relationships and increasing retention. It finally turns to e-mentoring specifically, a virtual intervention that could promote stronger relational networks in spite of the geographical isolation of the rural Mississippi Delta context.

Theoretical Foundations

Social cognitive theory, and in particular Bandura's (1986) theory of triadic reciprocity, form the theoretical underpinnings of e-mentoring as an effective intervention for promoting TFA teacher retention in the Mississippi Delta. Social cognitive theory posits that "human functioning is explained in terms of a model of triadic reciprocity in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other" (Bandura, 1986, p. 18). As compared to more linear understandings of a causal chain that leads to specific behaviors, triadic reciprocity holds the viewpoint that multiple factors "all operate interactively as determinants of each other" (p. 23) and lead to human outcomes. In the case of TFA teachers in the Delta, personal factors include teachers' cognition as well as racial, geographical, and regional backgrounds. Environmental factors include the communities in which teachers live and schools in which they teach, the people with whom they interact in each of these settings, and the experiences they face in and out of school. Following Bandura's (1986) conception of triadic reciprocity, behavior is influenced by personal and environmental factors and include the ways in which teachers think about and respond to settings, other people, and experiences.

Not all factors exert the same strength on individuals given differences in activity and circumstance (Bandura, 1986). When considering interventions, the cognitive aspects of teachers' experiences are best situated to be directly addressed by TFA in the Mississippi Delta as a means of increasing teacher retention. In other words, personal characteristics such as racial, education, and place background and environmental characteristics such as student demographics and the actions of school leadership cannot be directly changed through an organizational intervention. At the same time, personal and environmental factors cannot be

disregarded, as “the development and activation of the three sets of interacting factors are all highly interdependent” (Bandura, 1986, p. 24). E-mentoring allows for tailored support for teachers given their backgrounds and specific school and community environments while focusing on influencing their cognition about and behaviors towards their experiences while living and teaching in the Delta.

Triadic reciprocity describes the ways in which multiple, interacting, internal factors influence outcomes. Similarly, teachers’ experiences and the ways they think about their experiences are also influenced by multiple, interacting, external factors. Neal and Neal (2013) describe EST as a theoretical framework that underscores “the importance of interdependent and multilevel systems on individual development” (p. 723). Within a given setting, defined as “a set of people engaged in social interactions” (Neal & Neal, 2013, p. 733), individuals are influenced by a range of social interactions as well as forces such as social patterns and time. E-mentoring not only can address the ways in which teachers think about and behave given personal, cognitive, and environmental forces, it also introduces a new person to the ecosystem in which teachers interact. Authors such as Minarik et al. (2003) have applied systems theories to the concept of mentoring as a means of promoting teacher retention. Given the multilevel systems described within EST (Neal & Neal 2013), a mentor with a close relationship to a teacher can become part of a system in close proximity to that teacher. The mentor would therefore be able to understand the environmental and personal factors that are part of teachers’ experiences, serve as a social relationship that could positively influence the way these factors affect choices around remaining in their classrooms, and support teachers’ cognition related to their experiences as well as their behaviors related to staying, moving, and leaving.

Following the theories of triadic reciprocity and EST, e-mentoring can thus address both the social and cognitive domains of a teacher's experience in the Delta. The following review of intervention literature describes existing research that demonstrates the ways in which mentoring can promote retention both in terms of social interaction—such as through the formation of meaningful relationships—and cognition—such as through the development of teaching self-efficacy (Bandura, 1977). This review of literature illustrates the importance of applying theories that highlight the interconnected nature of factors influencing human behavior to developing an intervention for increasing teacher retention, as the research described demonstrates the ways in which mentoring, and e-mentoring more specifically, can influence multiple aspects of teachers' experiences and, thus, their behaviors around decision-making about remaining in the classroom.

Mentoring and Teacher Retention

In a study of Massachusetts public school teachers, Johnson et al. (2012) found that teachers' perceptions of working conditions more strongly predict job satisfaction, and therefore teacher retention, than all other aspects of their teaching experience combined. Following the model of triadic reciprocity (Bandura, 1986), Johnson et al.'s (2012) findings demonstrate that both environmental factors and the ways in which teachers think about those factors can have a stronger influence on retention than personal characteristics such as demographics, though these also influence retention (Hanushek et al. 2004). One environmental aspect of working conditions that impacts retention is the relationships teachers have with one another (Minarik et al., 2013). Teachers who report strong collegial relationships with and similar teaching ideology to fellow teachers are more likely to wish to remain in teaching than other teachers (Inman & Marlow, 2004; Johnson et al., 2012; Malloy & Allen, 2011, Schlichte et al., 2005). Schools that

actively promote high levels of structured, professional collaboration among teachers also tend to have higher rates of retention than other schools (Johnson et al., 2012; Malloy & Allen, 2011; Smith & Ingersoll, 2004). The following sections explore research literature around mentoring broadly, in rural contexts, and through virtual or e-mentoring arrangements in order to highlight key concepts for the design of an e-mentoring initiative for TFA teachers in the Mississippi Delta.

Mentoring and Relationship-Building

Structured collaboration, including mentoring programs aimed at supporting new teachers, have been shown to positively affect teacher retention in numerous settings (Brill & McCartney, 2008; Darling-Hammond, 2003; Hallam et al., 2012; Inman & Marlow, 2004; Smith & Ingersoll, 2004; Yost, 2006). Hallam et al. (2012) describe mentoring in the following way:

Various professions have found mentoring to be an important aspect of supporting and socializing new members of their organization. The word mentor comes from Homer's epic *The Odyssey* (trans. 1969). During Ulysses's absence, his son Telemachus was left in the care of his father's trusted friend Mentor, who taught and guided Telemachus in the transition from boyhood into manhood. Similarly, mentors today teach and guide new members of a profession or organization as they transition from new inexperienced teachers to seasoned professionals. (pp. 3-4)

Mentoring, therefore, acts as both a support and a means of socializing new teachers into their profession, but mentoring can take many forms and comprise of a wide range of activities. Though Harrell et al. (2004) found teachers rarely self-report mentoring as a factor behind decisions to stay or leave, the majority of research examining the relationship between mentorship and turnover has found mentorship to be a positive factor in support of staying. For

example, Odell and Ferraro (1992) found only a 4% attrition rate among their sample of 160 teachers four years after an intensive mentorship during the first year of teaching. They also found that, of the reported positive aspects of mentoring, teachers most strongly valued the emotional support they received from their mentoring relationships. In contrast to the 19.5% combined rate of movers and leavers after three years of teaching as described by the 2012-2013 TFS (Goldring et al., 2014), Odell and Ferraro's (1992) finding makes a strong argument for the effectiveness of mentoring in promoting teacher retention. In a seminal study on mentoring and teacher retention, Smith and Ingersoll (2004) found that having a mentor in the same field reduced the risk of leaving after the first year of teaching by about 30% and that higher levels of structured collaboration, such as co-planning time with other teachers, also had a positive effect on retention.

Smith and Ingersoll's (2004) study highlights the importance of purposeful relationships between teachers for combating isolation and promoting retention, as the authors found that initiatives creating relational supports for teachers were more effective than non-relational supports such as additional classes or seminars. Building off the work of Smith and Ingersoll (2004), subsequent research has consistently demonstrated that mentoring can have a positive impact on teacher retention (e.g. Hallam et al., 2012; Moulding et al., 2014). Indeed, Brill and McCartney's (2010) evaluation of literature proposing a variety of solutions for high teacher attrition finds that traditional interventions like salary incentives are largely ineffective in promoting retention, but that supportive professional communities and effective mentoring and induction programs are the most practical and effective interventions across a wide variety of school contexts.

Some studies, such as Smith and Ingersoll (2004) link mentoring and induction programs, which are initiatives aimed at providing guidance and orientation to new teachers in their transition to a school. While induction programs can be an important part of the relationship-building process, the two do not necessarily need to coexist. In a study of teachers who had remained in the classroom after five years, Yost (2006) found that teachers generally perceived induction programs as inaccessible and overwhelming but greatly appreciated the mentoring they had received. Brill and McCartney (2010) suggest that induction programs are beneficial primarily as the starting point for mentoring relationships that then continue through the first year or two of teaching. Induction can therefore initiate relationships, but these relationships are mostly developed and deepened over the course of a year or two of mentoring. In the context of TFA teachers in the rural Mississippi Delta, for example, a school-based induction program is not feasible as part of an intervention aimed at promoting retention because teachers are spread across multiple schools and districts. Instead, the intervention should focus on the development of individual mentoring relationships of the sort that have been shown to support teachers' professional skill-building (Clandinin et al., 2015; Schlichte et al., 2005), development of self-efficacy (Moulding et al., 2014), and integration into a community of teachers (Waddell, 2010).

All of the described characteristics of effective mentoring have the potential to promote higher rates of teacher retention (Hanushek et al., 2004). Mentoring programs can promote retention and reduce teacher attrition by more than two-thirds, but only if they are well designed and properly funded (Darling-Hammond, 2003). The quality and proximity of relationships is an important component within the design of an effective mentoring intervention. Through an analysis of survey data and follow-up interviews comparing and contrasting mentoring models in two different school districts, Hallam et al. (2012) found that strong relationships and proximity

have a larger impact on retention than less intensive forms of mentoring. One of the districts in Hallam et al.'s (2012) study focused on close proximity between mentors and new teachers, collaboration in Professional Learning Communities (PLCs), and emphasized professional and personal relationship-building. The other district reported strengthened relationships over a three-year period but had less frequent contact between teachers and mentors. Relationships were evaluated through qualitative analysis of interview and survey responses in which teachers described proximity, time spent with mentors, and types of communication and collaboration as well as the influence of mentoring on their decisions to stay or leave their positions in the district. The first district retained 91% of its teachers after the first year, as opposed to 58% of teachers in the other district. At the end of the study's three-year period, the difference in retention rates between the two districts remained high.

Hallam et al.'s (2012) study demonstrates that it is the relationships formed via mentoring, rather than the mentoring itself, that seem to have the strongest positive influence on teacher retention. Applying EST to an interpretation of Hallam et al.'s (2012) findings, mentors who build strong relationships with teachers become important members of the close systems that most directly affect teachers' experiences within their broader school and community systems. Mentors who are able to influence these broader systems have the potential, however, to have an even stronger influence on teachers' experiences. Schlichte et al. (2005) similarly found that mentoring has a positive impact on teacher retention but that larger networks of support are more impactful than a single mentor. In this study, teachers described a need for mentors who cared about them on both a personal and professional level and who could provide guidance both about teaching practice and in building relationships with others in their schools. Teachers felt that they were disconnected from their school communities, wanted stronger

collegial relationships, and felt that mentors could facilitate their integration into the school community (Schlichte et al., 2005). By extension, Waddell's (2010) study of fifth- and sixth-year teachers focused less on mentoring relationships as a primary intervention and instead focused on teachers' need to feel better integrated into school communities more broadly. Waddell (2010) found that integration can simultaneously occur through formal collaborative structures that are both supportive and empowering and through more informal collegial relationships that are both professional and personal, but that long-term retention relies on relationships that become authentic and self-driven over time.

While mentoring can support the development of an important relationship that promotes retention, a single supportive relationship is not enough to address the many stressors of the early years of teaching, and teacher retention can be better served through multiple meaningful relationships for new teachers (Schlichte et al., 2005; Wadell, 2010). These relationships need not be limited to a single school building, but instead extend to students, families, and the larger community. Minarik et al. (2003) directly apply the theory of systems thinking to their analysis of teacher attrition and retention. Like other authors, Minarik et al. (2003) find that in-school relationships are important to teacher retention but also describe the importance of relationships within a teachers' larger context. While Minarik et al. (2003) and Shlichte et al. (2005) both describe isolation as a factor contributing to attrition in the general teaching population, isolation is heightened within a rural context such as the rural Mississippi Delta (McCoy, 2006; Monk, 2007). In the Mississippi Delta, teachers often face outside pressure from an aspect of regional culture described as "factionalism" (Hyland, 2008, p. 158). Some TFA teachers in the Mississippi Delta report feeling like outsiders and that this feeling contributes to a desire to move elsewhere (see Chapter 2). Within the context of the rural Mississippi Delta, therefore, teachers

need relationships both within schools and ones that go beyond their school buildings to facilitate integration into the broader community.

Mentoring and Relationship-Building in a Rural Context

In a study of schools within a single rural district, Malloy and Allen (2007) found that one school had higher-than-average rates of retention, attributing this higher retention to school leadership's emphasis on collaboration and collective focus. New teachers in the school described high levels of support both from fellow teachers and administrators, and a shared vision centered on community-building and students (Malloy & Allen, 2007). Schools in the Mississippi Delta are typified by high rates of poverty, disproportionately low student achievement, and a majority-Black student population (Al-Fadhli & Singh, 2010; McCoy, 2006), characteristics that correlate with lower teacher satisfaction (Hanushek et al., 2004) and that highlight the need for explicit community-building to promote teacher retention. As one non-TFA Delta teacher described it, "Race is a problem for me because I am White in an all-Black school. Kids do not respond to me. I can't connect. I'm not part of this" (McCoy, 2006, p. 754). Given that TFA teachers tend to be White (Veltri, 2008), the racial and cultural mismatch that often exists between TFA teachers who are not from the region and their local counterparts remains a barrier to community integration (Moore, 2011).

Mentoring can support teachers' integration into their school communities, but in-school mentoring that primarily focuses on the development of professional relationships and skills will not fully address the geographic and social isolation described by TFA teachers who choose to leave to teach elsewhere. Minarik et al. (2003) found that teachers who are new to a community need particular support in building connections to their new home: "Systems thinking requires educational leaders to look beyond the boundaries of the school, the district, and the profession"

(p. 233). New teachers in Malloy and Allen's (2007) case study stated that challenges they faced were not overwhelming because they had more experienced people in their support networks to whom they could turn. The case study school emphasized three main dimensions: caring and support, high expectations, and meaningful participation (Malloy & Allen, 2007). Through survey responses, teachers at the school reported that all three dimensions were present and positively contributed to high rates of staff retention when compared to other schools in the district. Creating support networks beyond the walls of a single school, such as across the many schools at which new teachers in rural Mississippi are working, could allow teachers in a variety of teaching contexts to feel some of the positive conditions described by teachers in Malloy and Allen's (2007) case study. While a single mentor cannot create such broader support networks for teachers, mentors can help teachers understand the need to build such networks and provide guidance around how to build those relationships (Murphy, 2011). As such, a mentoring relationship can positively influence a teacher's perceptions of and relationships within their school community, yet the mentor does not need to be situated within the same school building as the teacher, an important consideration given the geographical constraints of an intervention aimed at supporting teachers spread across the rural Mississippi Delta.

E-Mentoring

Geography is a barrier to developing strong relational networks across teachers in a rural context. In the needs assessment described in Chapter 2, teachers frequently described long distances as a challenge both to professional and personal satisfaction, attributing their feelings of loneliness or isolation to rural geography. McClure and Reeves (2004), Monk (2007), and Lohfink, Morales, Yahnke, and Hernandez (2011) propose the use of technology that facilitates virtual support and collaboration as a strategy for addressing the geographical challenges of rural

teaching. While mentoring is most effective when mentors and new teachers have regular contact and close proximity (Hallam et al., 2012), proximity need not necessarily occur face-to-face. Watson (2006) studied a virtual mentoring initiative and found that teachers who had frequent and significant interactions with a mentor via email reported that mentoring relationships were positive and helpful. In Watson's (2006) study, email exchanges allowed teachers to safely ask questions, hear anecdotes, and otherwise connect with someone teaching in the same subject area. Watson (2006) found that working within the same subject area or having some other shared experience was also a condition of mentoring important to effectiveness, a condition similar to that described by Smith and Ingersoll (2004). In rural schools, one teacher is sometimes the only person in the whole district who teaches a subject or grade level (Monk, 2007). In the Delta, one teacher is sometimes the only person with a specific identity or experience prior to entering into their teaching context (McCoy, 2006). Looking beyond the direct geographic area is therefore necessary to create pairings that take shared experience into account. A virtual platform could host an e-mentoring initiative in which new teachers in the Mississippi Delta work with mentors who have a similar subject area, background, or prior experience, therefore promoting teachers' feelings of support, connection, and hopefully retention.

E-mentoring is defined as "a computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling, that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face mentoring" (Bierema & Merriam, 2002, p. 214). E-mentoring has been shown to have a positive influence on teachers' perceptions of several aspects of their personal and professional lives, including self-efficacy (Anthony, Gimbert, Fultz, & Parker, 2011) and relationships inside

and out of school (Murphy, 2011). Furthermore, Quintana and Zambrano (2014) found that e-mentoring was effective for teachers in rural areas in limiting isolation. The following sections detail various characteristics of effective e-mentoring programs and suggestions for the design of such an initiative as a means of promoting TFA teacher retention in the rural Mississippi Delta.

Self-efficacy and professional skills. In his seminal work on self-efficacy, Bandura (1977) writes: “Efficacy expectations determine how much effort people will expend and how long people will persist in the face of obstacles and aversive experiences” (p. 194). This theory supports the notion that teachers with higher self-efficacy would be more likely to remain teaching in what are traditionally viewed as schools with challenging working conditions than those with lower self-efficacy. Self-efficacy is a component of teachers’ cognition, one of the triadic factors that influences behaviors (Bandura, 1986). Anthony et al. (2011) found participation in e-mentoring increased teacher self-efficacy. Teachers in the study were required to participate in bi-weekly e-coaching meetings—the authors’ term for e-mentoring—as well as more traditional, in-person support structures as part of their alternative certification. Teachers who regularly participated in e-coaching had measurable increases in self-efficacy, while some teachers who did not receive e-coaching had decreases in certain areas of self-efficacy over the course of the school year. Teachers with increases in self-efficacy also reported larger growth in their professional teaching skills (Anthony et al., 2011). Hunt, Powell, Little, and Mike (2013) studied the effectiveness of e-mentoring as a means of increasing teachers’ professional skill. While Hunt et al. (2013) found some positive effects of e-mentoring on professional skill, some teachers reported feeling overwhelmed by the volume of resources and lack of direction in the e-mentoring relationship. The online nature of the relationship meant that resources could be easily transmitted from mentor to mentee, but were not necessarily prioritized, contextualized, or

modeled in their usage. Teachers' responses most often focused on their feelings about the relational aspects of mentoring (Hunt et al., 2013), but responses underscore the notion that these relationships must be in service of a clear purpose and mentors must be adequately prepared to reach teachers' needs.

One of the primary objectives of an e-mentoring intervention aimed at increasing teacher retention in the Mississippi Delta ought thus to be the growth of self-efficacy through the targeted development of professional skills. Applying the theories of triadic reciprocity and EST, the fostering of self-efficacy and teaching skill could positively influence retention in a number of ways. Teachers who feel more efficacious would think differently about the personal and environmental factors that influence their behaviors and, thus, their choices about remaining in the classroom. Teachers would also likely have a greater sense of well-being, be viewed more favorably by administrators and colleagues, and would feel more successful in helping students reach instructional goals. A primary focus of the e-mentoring intervention for TFA teachers in the Mississippi Delta would therefore be the development of teaching skills.

Relationships. Like the teachers in Hunt et al.'s (2013) study, many teachers who participate in e-mentoring value the relationships built through such an initiative despite the lack of face-to-face proximity (Bierema & Merriam, 2002; Murphy, 2011; Rowland, 2012; Watson, 2006). In Watson's (2006) qualitative study, teachers appreciated the opportunity to ask job-related questions of someone with experience in a similar context and did not report minding the fact that their mentors were often in a different location. Shrestha, May, Edirisingha, Burke, and Linsey (2009), however, found that this distance produced anxiety and impersonality in some interactions for mentors. The authors concluded that e-mentoring should be used only in situations where mentors and mentees are geographically removed and that mentors need to

receive specific training in order to be effective in an online setting. Given the geographical constraints of rural Mississippi an e-mentoring initiative is more viable than an in-person one, but Shrestha et al.'s (2009) findings pose an important design consideration for the creation of and training around e-mentoring. Rowland (2012) argues that, as well as geographical barriers, e-mentoring can be used to overcome barriers that might exist in traditional settings, such as gender differences and partiality. Similarly, in a study of 206 students, Murphy (2011) found that mentees were more likely to feel supported if they felt that they share relevant, similar characteristics (such as gender or occupation) with their mentors. These studies demonstrate the effectiveness of e-mentoring for creating a significant relationship for a teacher, which may be connected to higher rates of retention, but that the partnership must be carefully matched and participants must be adequately prepared.

E-mentoring can also help teachers form relationships beyond the mentoring pair itself. Though not specifically describing education, O'Neill (2011) argues that e-mentoring can be a means of engaging members of a community who do not typically interact. More pertinently, Murphy (2011) found that students who had positive experiences with mentors were more likely to seek out future developmental relationships, such as with other veterans in a field. If strong community, collegial, and administrative relationships are important to teacher retention, then e-mentoring could both prepare teachers with the skills to develop and strengthen such relationships and to build their desire for those relationships. Additionally, the development of professional skills through e-mentoring could positively influence school leadership, who would view them as more successful educators. Conversations aimed at building cultural understanding would also help teachers build stronger relationships in and outside of school, particularly given the traditional mistrust of outsiders in the Mississippi Delta (Hyland, 2008). Finally, stronger

relationships at school and in local communities, alongside a meaningful mentor relationship, would increase teachers' overall professional and personal well-being (Clandinin et al., 2015; Curry & O'Brien, 2012).

TFA teachers in the Delta do not merely feel disconnected from their schools and communities. Another system that plays an important role in teachers' experiences as part of TFA is the network of relationships between themselves. TFA teachers in the rural Delta often feel disconnected from one another and are more likely to cite isolation among themselves than feeling like outsiders in their communities as disadvantages of teaching in the region (see Chapter 2). As one teacher wrote: "I feel isolated because I do not have any family in the area and essentially no support system as [TFA teachers] are placed all over the state making it logistically difficult to work or collaborate with anyone." An e-mentoring initiative could serve to build collaboration and connection between TFA teachers and mentors who also taught in the TFA program. While they might not be in the same town, stronger collaboration between teachers who worked in similar schools and in similar environments could provide opportunities to relate to and learn from mentors who faced similar challenges as outsiders in a new community. Effective integration into the teaching profession that promotes long-term retention does not occur only through formalized structures (Clandinin et al., 2015; Waddell, 2010), but opportunities need to be provided for teachers to build informal relationships in contexts where geography limits access to in-person social networks. An intervention that uses technology to connect TFA teachers in rural Mississippi might have a positive impact on teacher retention.

Conclusions

A wide range of causes and factors drive teacher attrition, interacting both as part of teachers' environmental ecosystems (Neal & Neal, 2013) and internally as a teacher lives

through and makes sense of their experiences (Bandura, 1986). Many of these causes and factors include a relational element, including relationships with administrators (Ladd, 2011), colleagues (Smith & Ingersoll, 2004), and communities (Minarik et al., 2003). While isolation has been shown to drive teacher attrition (Schlichte et al., 2005), strong relationships promote teacher retention (Waddell, 2010). This review of literature synthesized studies demonstrating that a supportive mentor within the ecosystem in which teachers live and work can mitigate both external and internal factors that lead to attrition and, instead, promote higher rates of retention. Rural geography and cultural mismatch between teachers and communities in the Mississippi Delta pose challenges for the traditional, face-to-face methods of building mentoring relationships (McCoy, 2006), but virtual interventions hold promise for challenges in rural education (Monk, 2007). E-mentoring that addresses teachers' self-efficacy through the development of their professional skills and limits their feelings of isolation by creating mentoring relationships and supporting the fostering of other relationships both in and out of school could promote higher rates of retention among TFA teachers in the Delta.

Chapter 4

Intervention Procedure and Program Evaluation Methodology

Key factors driving TFA teacher attrition in the Mississippi Delta personal and professional isolation with connections to teaching self-efficacy, relationships in and out of school, and challenges related to rural place context (see Chapter 2). One proposed intervention aimed at addressing the teacher shortage is an e-mentoring program, as e-mentoring has been shown to have a positive influence on teachers' self-efficacy (Anthony et al., 2011), relationships inside and out of school (Murphy, 2011), and isolation due to living in a rural context (Quintana & Zambrano, 2014). This intervention, known as the e-mentoring initiative, targets these underlying factors with the aim of increasing TFA teacher retention in the rural Mississippi Delta beyond the initial two-year commitment required for participation in TFA.

Research Design

In order to design an e-mentoring intervention and evaluate its effectiveness in promoting retention, a theory of treatment was developed in the form of a causal diagram (Leviton & Lipsey, 2007) that shows links between program inputs, causal processes, and outcomes (see Figure 1). The theory of treatment diagram illustrates the following intervention and underlying processes. E-mentoring took the form of virtual meetings occurring every other week between second-year TFA teachers and a mentor who has experience teaching in the Delta through TFA. Mentors and mentees also communicated on an informal basis between mentoring sessions as part of the development and maintenance of their personal relationships. Bi-weekly mentoring conversations did not directly address retention, but rather focused on underlying processes with relationships to retention, such as professional skills, cultural competence, and relationship building. The rationale for underlying processes to be addressed according to the theory of

treatment is as follows. The development of professional skills could increase teachers' self-efficacy, which has been associated with higher rates of retention (Moulding et al., 2014; Yost, 2006). Conversations aimed at building cultural understanding could help teachers build stronger relationships at school, particularly given the traditional mistrust of outsiders in the Mississippi Delta (Hyland, 2008). Finally, stronger relationships at school and in local communities, alongside a meaningful mentor relationship, could increase teachers' overall professional and personal well-being (Clandinin et al., 2015; Curry & O'Brien, 2012). The theory of treatment underlying the e-mentoring intervention is the belief that, if TFA teachers in the rural Mississippi Delta have stronger teaching self-efficacy and feel better connected to their colleagues, communities, and veteran teachers as a result of e-mentoring, then they will be more likely to remain teaching in the region beyond two years.

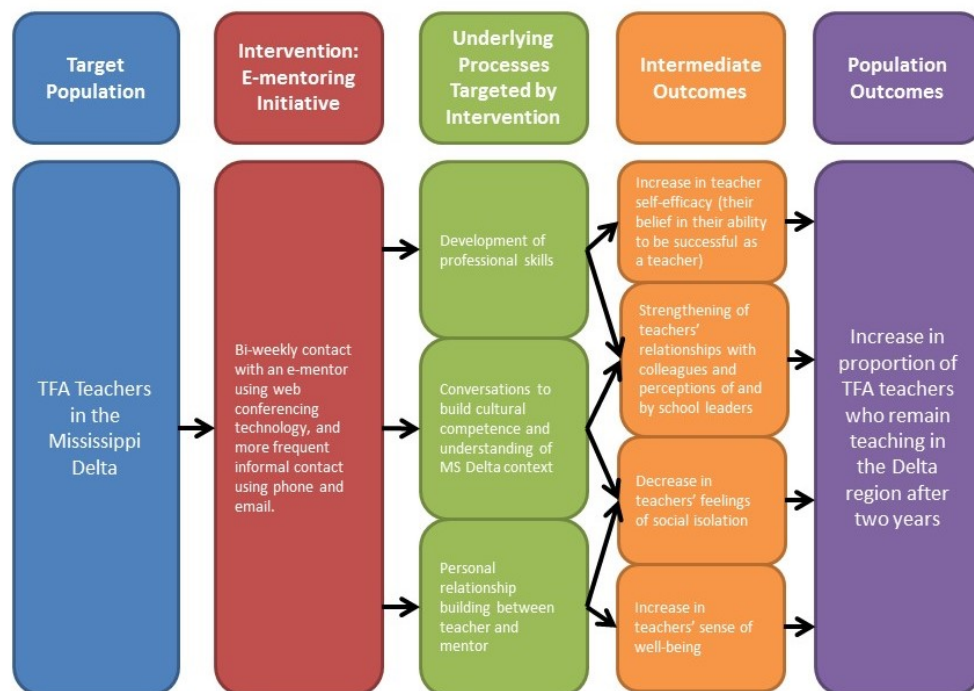


Figure 1. A diagram of the theory of treatment

This theory of treatment informs a logic model depicting intervention inputs, activities, outputs, and outcomes (see Appendix C). The inputs necessary to creating an e-mentoring initiative included an alumnus teacher to serve as mentor, mentee and mentor time, technological resources, and incentives for participation. Outputs of the intervention included creation of mentor and TFA teacher pairs and the activities in which they engaged. Participants were 10 TFA teachers in their second year of teaching and a mentor teacher. The mentor and mentees formally met on a bi-weekly basis using a video conferencing platform. Activities also included unscheduled, informal communication between mentor and mentees. Short-term outcomes included the creation of relationships between teachers and mentor, and the development of both professional and relationship-building skills. Medium-term outcomes included increases in teachers' self-efficacy and sense of well-being, strengthening of their relationships with colleagues and administrators, and decreases in feelings of social isolation. These short- and medium-term outcomes sought to lead to the long-term outcome of an increase in teachers' intentions to remain for a third year as compared to their intentions prior to e-mentoring. The theory of treatment model is primarily situated within the output and outcome sections of the logic model, as it illustrates the causal processes through which the intervention might be effective.

Leviton and Lipsey (2007) also provide suggestions for research design through their discussions of subject issues and the elimination of rival explanations. Given that “target groups that do not have the problem or are not at risk for the problem obviously cannot be helped by treatment” (Leviton & Lipsey, 2007, p. 42), teachers engaged in e-mentoring should not disproportionately include those who are already planning to remain in the classroom for more than two years. Teacher ought therefore to report their intentions to stay, move, or leave both

prior to and after engaging in e-mentoring, and this information must be considered in process and outcome evaluation, as subject issues could be one potential rival explanation for increases in teacher retention. All relevant variables related to participating teachers, such as their initial intentions about staying or leaving, must be included in evaluation procedures so that they can be appropriately accounted for during program implementation and evaluation. The small sample size associated with this intervention means that causal inferences about program outcomes cannot be drawn using statistical methods. Instead, a descriptive study was designed to qualitatively explore the ways in which teachers' perceptions changed or did not change as a result of the intervention. The following sections provide an overview of both process and outcome evaluation designs and how they support a descriptive understanding of e-mentoring in the context of TFA teachers in the Mississippi Delta.

Process Evaluation

Conducting a process evaluation helps to establish fidelity of program implementation, or the extent to which a program was implemented as it was intended by its designers (Dusenbury, Brannigan, Falco, and Hansen, 2003). To evaluate intervention process, the mentor completed attendance reports and mentee teachers completed a post-survey following the intervention in order to provide information mentoring effects and program implementation. The design and analysis of attendance reports and post-surveys sought to address the following process evaluation questions:

1. Did mentor and TFA teacher pairs complete the required activities related to participation in the intervention?
2. Are all teachers participating in the intervention able to rate and provide information related to perceptions of e-mentoring for building relationships with mentor,

relationships with school leadership, relationships with colleagues, teaching skills, and understanding of regional/cultural context as demonstrated by successful completion of a post-survey?

Fidelity of Implementation

The evaluation questions listed above relate to short- and intermediate-term outcomes described in the logic model. As such, these questions can be used to guide process evaluation of the intervention process, including assessing the extent to which the e-mentoring program was implemented with fidelity. Following Dusenbury et al.'s (2003) definition of fidelity of implementation, aligning process evaluation to the logic model helps ensure that programmatic objectives are achieved and that quality is maintained. As fidelity is measured with attendance reporting, for example, adjustments can be made to mentor training in order to keep the intervention in line with objectives. High fidelity of implementation for the e-mentoring intervention would mean that the mentor and mentees would attend and in engage in all of their bi-weekly meetings, for a total of six hour-long meetings over the course of the intervention. Finally, mentor and mentee conversations would cover topics from mentor training sessions as assessed by the second process evaluation question.

Because there are multiple, complex conditions that must be met in order to achieve high fidelity of implementation with the e-mentoring program, indicators of fidelity must be carefully considered and evaluated throughout the duration of the intervention. Low fidelity of implementation, in which the program is not implemented as designed or participants do not engage in intervention activities, could occur for a number of reasons. If mentors or mentees do not participate in required meetings, then fidelity would be lowered. Implementation would also have low fidelity if meetings do not address intended program objectives such as the

development of teaching skill, cultural competence, and relationship-building skill. Finally, participant attrition due to changes in placement, loss of interest, or other unforeseen factors would lower fidelity of implementation.

Indicators of fidelity of implementation. Selecting indicators of fidelity of implementation ought to depend on the relationship of programmatic aspects to expected outcomes (Schulte, Easton, & Parker, 2009). Indicators include mentor and mentee attendance and adherence to programmatic objectives.

Attendance. While research does not dictate the precise frequency with which teachers and mentors must meet in order to see successful change, greater frequency of contact has been shown to lead to stronger results (Hallam et al., 2012). In the e-mentoring intervention for TFA teachers in the Mississippi Delta, the mentor held e-mentoring meetings every other week across the period of intervention implementation, for six total meetings with each mentee. The mentor recorded attendance in an online, password-protected spreadsheet.

Adherence to e-mentoring meeting objectives. Adherence to objectives for e-mentoring meetings were measured through survey questions answered by mentees at the close of the intervention period. Mentees' completion of ratings and descriptions of the effectiveness of e-mentoring for building relationships with a mentor, relationships with school leadership, relationships with colleagues, teaching skills, and understanding of regional/cultural context would demonstrate adherence to objectives. These questions were aligned with the logic model to ensure that short-term outcomes were addressed during mentoring meetings. By analyzing responses to these questions, outcomes can be better understood to have been influenced by e-mentoring as opposed to external factors.

Outcome Evaluation

Given that the e-mentoring initiative is aimed at increasing TFA teacher retention in rural Mississippi, the outcome evaluation design for to this study is designed to address the following research questions:

1. What is the effect of e-mentoring on TFA Mississippi Delta teachers' intentions to stay as teachers in their placement schools, move to teach elsewhere, or leave the teaching profession following their two-year TFA commitment?
2. What aspects of e-mentoring influenced teachers' intentions to stay, move, or leave, if any?

The hypothesis underlying the intervention is that teachers will be more likely to decide to remain teaching in the Delta after participating in e-mentoring as compared to their intentions prior to e-mentoring. The relationship between research questions, constructs, measures and implementation, data collection, and data analysis can be found in a summary matrix (see Appendix D) and will be described in greater detail throughout this section.

Effect Size

The outcome evaluation uses qualitative methods in order to provide a rich, descriptive reporting of the relationship between e-mentoring and teacher retention for TFA teachers in the Mississippi Delta. One of the reasons qualitative methods are favored in this study design over quantitative methods is concerns of effect size, further outlined in this section. A review of research literature reveals few studies that focus specifically on understanding the effectiveness of e-mentoring for promoting teacher retention. Studies that evaluate the effectiveness of mentoring for teacher retention, such as Hallam et al. (2012), tend to have small sample sizes and therefore rely on descriptive methods rather than through a calculation of statistical significance.

These studies provide qualitative analyses of teachers' decisions around staying and leaving without statistical analysis that would provide information useful in calculating a minimum detectible effect size that would have practical significance for e-mentoring and retention.

For the purposes of this study design, Allen, Eby, Poteet, Lentz, and Lima's (2004) meta-analysis of the influence of mentoring on job satisfaction—though not necessarily within the field of education—is used to determine an appropriate effect size for ensuring that a study would have adequate statistical power to make a strong causal claim about the effectiveness of mentoring on teacher outcomes (Rossi, Lipsey, & Freeman, 2004). Job satisfaction has been correlated with teacher retention (Johnson et al., 2012), making the meta-analysis conducted by Allen et al. (2004) a crude but useful proxy for determining necessary effect sizes for the e-mentoring intervention. Allen et al. (2004) found that effect sizes for job satisfaction as a result of mentoring ranged between 0.18 and 0.30. If statistical power for a study would be .80, then an effect size of 0.30 in a two sample t-test would require a population sample of at least 352 teachers. Given that TFA Mississippi has fewer than 100 teachers eligible for the intervention, a study of the effectiveness of e-mentoring for promoting retention would be underpowered. Instead, descriptive methods will be applied to evaluating the outcomes of the e-mentoring intervention.

Evaluation Design

In order to address the outcome evaluation questions posed above, a survey was conducted using Google Forms during teachers' two-year commitment with TFA in the Mississippi Delta in which they described their decisions to stay as teachers in the region, move to schools outside of the Delta, or leave the profession entirely. This outcome evaluation used a pretest-posttest design in which the target population took the same survey prior to and after

engaging in the intervention, which can be seen in Appendix E and will be described in further detail throughout this section. As in the needs assessment (see Chapter 2) the dependent variable being assessed was turnover, which includes the categories of stayers, movers, and leavers. The dependent variable of turnover was measured at two points in time: during participants' second year with TFA directly prior to the onset of e-mentoring and towards the end of their second year directly following e-mentoring.

To address the outcome evaluation question about teacher retention, teachers participating in e-mentoring completed the same survey at the beginning and end of the e-mentoring period (Appendix E). Teacher mobility was reported through responses to a questionnaire item in which teachers indicated whether they would be remaining in their placement school, teaching at another school, or leaving teaching at the beginning of the following school year. This question was used to categorize teachers as stayers, movers, and leavers, the categories used by the National Center for Education Statistics' SASS (Goldring et al., 2014). Quantitative analysis of responses to this question that compared responses across the two survey timeframes provided the basis for impact evaluation of the effectiveness of the e-mentoring intervention as it related to teacher turnover (Newcomer, Hatry, & Wholey, 2015). Other survey questions provided both quantitative and qualitative data to better describe characteristics of e-mentoring that were seen as effective or not effective for promoting retention. Requiring that the intervention groups completed pretest and posttest surveys describing their plans to stay, move, or leave was a design consideration aimed at reducing threats to study validity (Newcomer et al., 2015).

In order to bolster this exploration, the study used a concurrent triangulation design in which qualitative data were also gathered in order to help explain and interpret the findings of the quantitative pretest posttest survey question about turnover. Qualitative data were collected

through survey questions consisting of open-ended and Likert-type questions in addition to the primary question about staying, moving, or leaving. The population from which teachers were recruited for participation in e-mentoring was that of all TFA teachers who were entering their second year of teaching in the Delta during the fall of 2018, a group of approximately 60 teachers in total. The intervention group included a sample of 10 teachers. Due to the small population of teachers eligible for the study, the intervention group was necessarily a convenience sample of teachers who were interested in participating in e-mentoring.

Variables and Description of Measurement

Several variables needed to be measured in order to understand the effectiveness of an e-mentoring initiative in promoting teacher retention in rural Mississippi. The dependent variable was teacher mobility, defined as in the SASS National Center for Education Statistics as teachers' intentions to stay in their current school, move to another school, or leave the teaching profession entirely (Goldring et al., 2014). The independent variable was the treatment of e-mentoring, defined as "a computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling" (Bierema & Merriam, 2002, p. 214). Several mediating variables related to teachers' perceptions about various conditions of their work and life in rural Mississippi were also measured, as these demonstrate the relationship between e-mentoring and teacher mobility. Mediating variables related to this study are teachers' perceptions of their professional skills, relationships with school leadership, relationships with colleagues, and feelings of isolation. Moderator variables include teacher characteristics that might influence the relationship between e-mentoring and mobility. The relevant demographic moderator variables come from needs assessment findings (see Chapter 2) and are teacher race and place-type background. Figure 2 depicts a conceptual

framework illustrating the relationship between variables, which are also described in further detail in the remainder of this section.

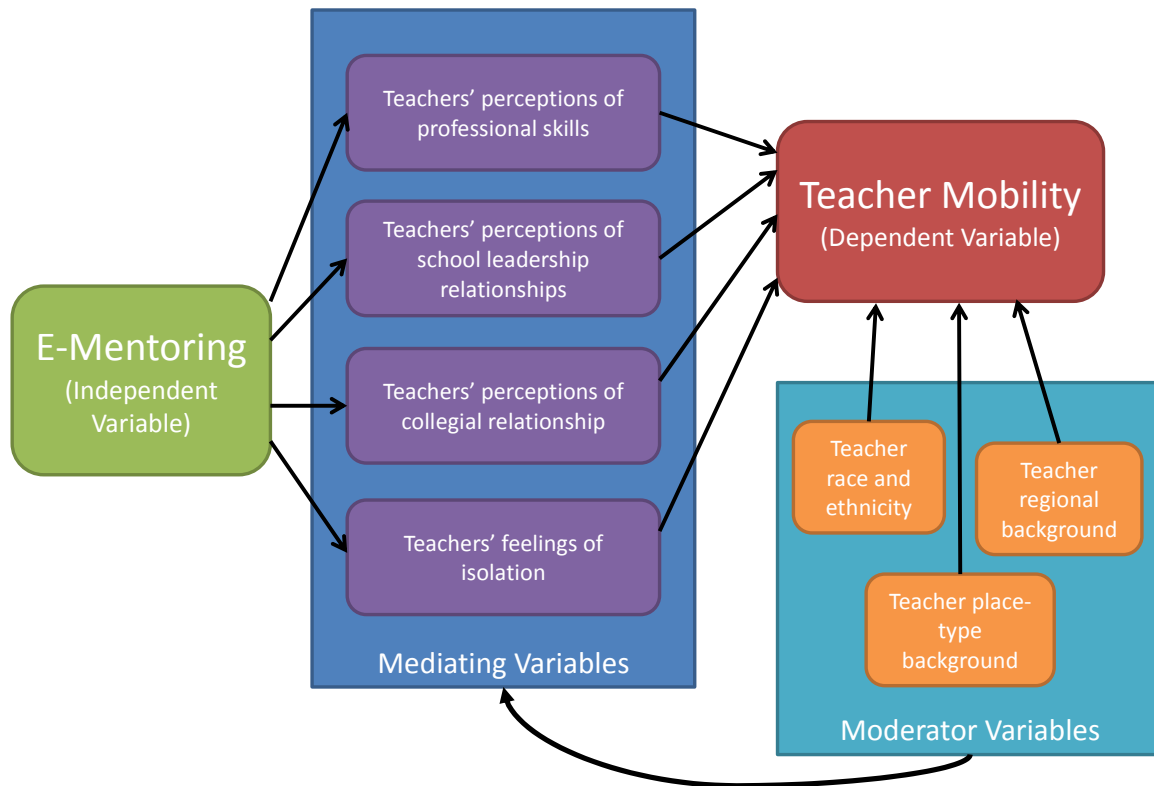


Figure 2. A conceptual framework diagram of variables

Both mediating and moderator variables were assessed through questions on pre- and post-test surveys (see Appendix E). Mediating variables assessing teachers' perceptions were measured through a series of 5-point Likert-type scales ranging from "Strongly Agree" to "Strongly Disagree" and through participant responses to open-ended questions. The Likert-type scale questions were: "I can build strong relationships with an e-mentor"; "I can build stronger relationships with my school leader as a result of e-mentoring"; "I can build stronger relationships with my colleagues at school as a result of e-mentoring"; "I can improve my teaching skill as a result of e-mentoring"; and "I can gain a better understanding of my regional

and/or community context as a result of e-mentoring.” Teachers also provided answers to four open-response questions aimed at better describing the relationship between e-mentoring’s mediating variables and their final decision to stay, move or leave. These questions are: “Do you believe that e-mentoring can influence your decision to stay, move, or leave at the end of this year? Why or why not?”; “What are the greatest benefits of e-mentoring?”; “What are the greatest drawbacks of e-mentoring?”; and “What else you like to share about e-mentoring?”

Information about moderator variables were collected through multiple choice questions. Teachers self-reported racial background by selecting one or more options from the following list: American Indian or Alaska Native; Hawaiian or other Pacific Islander; Asian or Asian American; Black or African American; Hispanic or Latino; Non-Hispanic White; or Other. Racial mismatch between teachers and students has been shown to be correlated to higher teacher attrition (Hanushek et al., 2004; Renzulli et al., 2011), so the racial background of teachers in the Delta’s majority Black schools might moderate the effect of e-mentoring. Similarly, place-type background is a moderator variable in the context of this study, as teachers are more likely to remain teaching in schools near to or in community types that are similar to the communities in which they grew up (Boyd et al., 2005). Teachers identified their place-type background by selecting whether they primarily grew up in an urban, suburban, or rural area.

The dependent variable of teacher mobility can be influenced by both mediating and moderator variables, but the intervention of e-mentoring—the independent variable—can only have a direct effect on the mediating variables. E-mentoring does not have the ability to change a participant’s race or the type of place in which they grew up, though the research literature repeatedly shows that these factors influence teacher turnover (e.g. Boyd et al., 2005; Hanushek et al., 2004). Appendix F provides an outcome evaluation data collection matrix demonstrating

the relationship between these variables. The survey design includes questions related to these moderator variables in order to provide a clearer picture of teachers' decisions about staying, moving, or leaving. In other words, the collection of demographic information from participants allows for analysis that can better describe the extent to which e-mentoring can influence teacher turnover. By collecting information on both mediating and moderator variables, even though the intervention design itself does not directly affect this latter category, teachers' decisions can be better understood as having been related to e-mentoring or because of other factors that simply cannot be changed through e-mentoring. The collection of information around both mediating and moderator values is one way to strengthen the study design in that it proves a richer set of descriptive data from which to base survey analysis.

Data Collection and Analysis

The following section describes methods for collecting and analyzing data gathered after the administration of both pre- and post-surveys.

Data Collection

Data were collected on pre- and post-surveys (see Appendix E) to gather quantitative information about participants' intention to stay as teachers in the Mississippi Delta, move to teach elsewhere, or leave the teaching profession entirely following their two-year commitment with TFA. Additional qualitative data were collected around teachers' perceptions of e-mentoring's effectiveness at supporting relationships, teaching skill, understanding of community context, and decisions to stay, move, or leave. To see the relationship between different components of the surveys and the overarching research questions, refer to Appendix B. Pre-surveys were completed in January 2019 in the week prior to each participant's engagement in the initial e-mentoring session. Post-surveys were completed in April 2019 in the week

following each participant's final e-mentoring session. Participants were asked to complete online surveys hosted by Google Forms, a free survey hosting service. Each survey took approximately 10 minutes to complete and consisted of a combination of multiple choice, Likert-type scale, and open response questions.

Data Analysis

Once surveys were completed, data were exported from Google into a Microsoft Excel spreadsheet. Data were cleaned for consistency. For example, some teachers' responses to the districts in which they work were renamed, such as the response "Cleveland School District" being converted to simply "Cleveland." Simple descriptive statistical analysis was conducted to determine the proportion of teachers who were planning to stay, move, and leave prior to and after the e-mentoring intervention. Pivot tables were produced in Excel in order to provide an overview of the relationship between turnover and responses to demographic and Likert-type scale questions. These tables provided descriptive information about the proportion of teachers within each turnover category who selected each response to the questions asked. Open response questions about e-mentoring's relationship to turnover and perceived advantages and drawbacks of e-mentoring were coded to find common themes using a grounded coding approach in which themes emerged from analysis of survey responses. These common themes helped to establish theories about the effectiveness of e-mentoring to support teacher retention, using an approach of inductive reasoning.

Strengths and Limitations of Design

The plan described above sought to create the strongest possible design for a descriptive study of the effectiveness of an e-mentoring intervention for promoting TFA teacher retention in the rural Mississippi Delta. At the same time this study design has several limitations, most of

which are connected to organizational and logistical constraints. For example, the professional development structures used by TFA in the Mississippi Delta region meant that formal sampling that creates control and intervention groups is not feasible. Instead, a convenience sample must be used, meaning that the study cannot take an experimental approach (Shadish, Cook, & Campbell, 2002). The research design for this study is, then, a quasi-experiment taking a one-group pretest-posttest design. This form of design does not involve a control group and uses pre- and post-assessments from the same study group over a period time to see how a variable, in this case the treatment of e-mentoring, affects responses (Shadish et al., 2002). A simple pre- and post-design is mostly appropriate when “conditions are unlikely to change much on their own” (Rossi et al., 2004, p. 291), as is the case in this study context as teachers tend to remain in the same placement school and community, with the same support structures from their school and from TFA, over the course of their second year of teaching. A pre- and post-survey design that collects information about turnover decisions at multiple points across the second year of teaching helps illustrate whether or not the intervention had any influence on the sample of teachers within the study population. Additionally, comparing results between responses on pre- and post-surveys hopefully limits bias resulting from analysis of post-surveys alone (Rossi et al., 2004).

Another related study limitation is that the available population of teachers who could be eligible to participate in e-mentoring was relatively small. A large sample can promote stronger external validity in a study because it mitigates the extent to which differences between intervention and control groups could be attributed to variations between participants that was not controlled for in sampling design (Shadish et al., 2002). Following the ideal effect sizes described by Allen et al.’s (2004) meta-analysis, the intervention sample size would be too small

for a study with the appropriate power for making statistical claims. Though this is a limitation, descriptive methods can still be used to provide helpful information about the effectiveness of mentoring on teacher retention, as were used by Hallam et al. (2012). A descriptive study may not be able to determine causality, but it can still demonstrate a relationship between participation in e-mentoring and increased rates of retention.

The descriptive nature of this study is both a limitation and strength. While a descriptive study cannot determine a causal or correlational relationship between intervention and outcomes, qualitative data are still useful in “discovering and exploring causal explanations” (Shadish et al., 2002, p. 389). Another limitation of the study is generalizability. The characteristics shared by participants in the study—all members of TFA, all holders of college degrees and teaching certifications, all teachers in the rural Mississippi Delta, and so on—hampers the generalizability of evaluation results to other organizations, populations, and settings. To promote generalizability in evaluation analysis, the pre- and post-surveys include questions to gather data about additional demographic variables and other qualitative information about participants’ choices to stay, move, or leave. Demographic questions around racial and regional backgrounds provide information around moderator variables that might influence teachers’ choices. Similarly, questions about teaching skill, relationships, and understanding of context address the mediating variables that underlie the medium-term outcomes proposed in the logic model and that might be influenced by e-mentoring. Collection of this information seeks to strengthen the qualitative design of the outcome evaluation, to provide further explanation for findings, and to help interpret findings. While programmatic limitations mean that a statistically significant result cannot be determined around the effectiveness of e-mentoring for promoting teacher

retention, it will still provide descriptive information about such an intervention's utility in the Delta and other contexts.

Intervention Procedure

The following sections outline the e-mentoring initiative procedure, including participants, goals, and the context for instruction.

E-mentoring Participants

Participants in the program included 10 TFA teachers who were recruited and participated in the intervention during their second year of teaching in the Mississippi Delta. All participants worked with the same mentor, an alumna of TFA in the Mississippi Delta. The choice to have a mentor who also participated in TFA was intended to create a shared experience between mentor and mentees, an important condition noted in existing research about the effectiveness of mentoring for teacher development and retention, such as Smith and Ingersoll (2004) and Watson (2006).

Darling-Hammond (2003) cautions that mentoring programs can promote retention and reduce teacher attrition by more than two-thirds, but only if they are well designed. Much of the design of the intervention activities was based on Bland, Taylor, Shollen, Weber-Main, and Mulcahy's (2009) text on creating strong mentoring programs in an academic context, a work that highlights the creation and maintenance of mentor and mentee relationships. Similarly, Hallam et al. (2012) found that mentoring initiatives that focused on relationship building and regular contact between novice teachers and mentors are more effective than mentoring that deprioritizes relationship building. As such, the mentor engaged with teachers in formal e-mentoring sessions every other week using video conferencing technology and made other informal contact through modes such as phone calls, emails, and text messages as needed. This

informal contact served two primary purposes: to arrange scheduling and other logistical matters related to formal mentoring sessions, and to follow-up on pre-determined goals decided during formal mentoring sessions. The content of formal mentoring sessions was dictated by individual teacher needs.

E-mentoring utilized web conferencing technology and occurred during the second semester of the 2018-2019 school year. TFA in the greater Mississippi Delta region provides ongoing training and professional development for its teachers, who are required to participate in a certain number of hours in order to receive teaching licenses in the state of Mississippi. Participants in the e-mentoring initiative counted their hours communicating with the mentor towards their licensure requirements so that participation in the initiative did not overly disrupt or add to their existing workloads. Additionally, participants had the opportunity to guide the discussions during mentoring sessions to address specific needs related to professional expectations coming both from their schools and from TFA. The accrual of certification hours and the individualized support and attention gained through participation in e-mentoring were the primary incentives for teachers' participation in the intervention study.

E-mentoring Goal Statement

The e-mentoring initiative broadly focused on the development of relationships, teaching skills, and interpersonal skills for operating in Mississippi Delta schools, as research literature indicates that these factors could lead to the long-term outcome of increased teacher retention. These goals are also demonstrated in the previously described logic model (Appendix C). In the short term, the e-mentoring initiative emphasized the development of trusting relationships between teachers and the mentor, a condition necessary for successful mentoring (Hallam et al., 2012; Minarik et al., 2003; Smith & Ingersoll, 2004). Bi-weekly virtual meetings between the

mentor and teachers also sought to address and strengthen teachers' professional skills (Clandinin et al., 2015; Schlichte et al., 2005). The points of contact between the mentor and teachers also included discussions aimed at helping teachers understand and navigate the cultural context of the Mississippi Delta. Through conversations that addressed both professional and cultural aspects of their work and life in the Delta, teachers and the mentor worked to build strong, authentic relationships with one another. Finally, e-mentoring sought to help teachers form relationships beyond the mentoring pair itself. Murphy (2011) found that students who had positive experiences with mentors were more likely to seek out future developmental relationships, such as with other veterans in a field. If strong community, collegial, and administrative relationships are important to teacher retention (e.g. Clandinin et al., 2015; Curry & O'Brien, 2012; Kukla-Acevedo, 2009), then e-mentoring could support development of the skills to build and strengthen such relationships and to increase participants' desire for those relationships within and outside their placement schools.

In the intermediate-term, the development of teachers' professional skills through e-mentoring could work both to increase teachers' self-efficacy, which has been associated with higher rates of retention (Moulding et al., 2014; Yost, 2006), and their relationships with school leadership, who could view them as more successful educators. Conversations aimed at building cultural understanding could also help teachers build stronger relationships in and outside of school, particularly given the traditional mistrust of outsiders in the Mississippi Delta (Hyland, 2008). Finally, stronger relationships at school and in local communities, alongside a meaningful mentor relationship, could increase teachers' overall professional and personal well-being (Clandinin et al., 2015; Curry & O'Brien, 2012). The specifics of e-mentoring conversations

about professional skill, cultural context, and relationship building were guided by participants' discussions of their needs with their mentor.

Goals for Mentor Preparation

The overarching goal of the e-mentoring initiative was to retain a larger proportion of TFA teachers in their placement schools in the Mississippi Delta following their second year of teaching. The overarching instructional goal for mentor preparation was therefore that the mentor use an online platform to build authentic relationships with mentees, deliver support around the development of professional skills, and guide mentees through strengthening other relationships both in and out of school. The mentor needed to be prepared, additionally, to work one on one with mentees to provide a differentiated mentoring experience that was aligned to need, context, and communication preferences. As such, the instructional goals and specific learning objectives of mentee development varied across the e-mentoring initiative.

Identification of Entry Behaviors

The mentor participating in the e-mentoring initiative brought an existing set of knowledge, skills, and attitudes. In order to have relevant, shared experience with mentees, the mentor had completed at least two years of teaching in the Delta prior to engagement in the intervention. As such, the mentor brought fundamental knowledge and skills related to teaching, school and community context, and metacognitive understanding of personal strengths and areas for growth. Given the challenges described by teachers about the conditions of teaching in the rural Delta (see Chapter 2), this metacognitive awareness is of particular relevance. If the mentor did not believe that she could be effective in the face of these challenges, she would have been less likely to remain in such schools (Bandura, 1986), and less likely to be able to prompt mentees to do the same. A mentor who is aware of the difficulties posed by the teaching context

and the ways in which she reacted to those challenges would likely be better able to relate to and share about their experiences with mentees: “Much of [people’s] behavior is motivated and regulated by internal standards and self-evaluative reactions to their own actions” (Bandura, 1986, p. 20). In other words, if the desired goal of e-mentoring is for more teachers to remain working in rural schools, then the mentor must be able to support teachers in developing motivated and self-evaluative behaviors.

Similar to metacognitive awareness, the mentor needed also bring a positive attitude towards growth and development. To be successful in the context of supporting TFA teachers in their second year of teaching, the mentor needed to have successfully completed her own licensure requirements and other professional obligations during the two years as a TFA teacher. The mentor must also have demonstrated interest in continuing to support teachers in the Delta region. Positive orientations towards growth and development hopefully alleviate a potential threat to the intervention in the form of the mentor losing interest in the intervention.

Finally, the mentor needed to bring technological skill and fluency to the process of e-mentoring. The initiative used the same video conferencing platform that teachers use for their regular TFA professional development, but the mentor herself needed also to have familiarity with the platform. The mentor had to learn how to share a screen, operate the camera, and use the microphone. These technological requirements were addressed in early stages of mentor preparation.

Description of Learners

The e-mentoring initiative involved a mentor alumna of TFA in the Mississippi Delta and 10 participants who were completing their commitment to TFA in the same region. The mentor was no longer a classroom teacher in the Delta but had continued to work in education, to live in

a different part of Mississippi, and had spent several years working with first- and second-year TFA teachers in other capacities. Despite these differences in current roles between the mentor and mentees, the mentor shared certain characteristics based on the shared experience as having been a TFA teacher in the Delta. TFA teachers tend to be in their twenties, have graduated from competitive universities, and come from areas other than the Mississippi Delta (Baines, 2010; Humphrey et al., 2008, Veltri, 2008). The mentor was older than participants and no longer lived or worked in the Delta but was still located in the state of Mississippi. The mentor had taught in two communities in the Delta across four years of teaching, and through shared experiences of classroom teaching the mentor had an understanding of the typical characteristics and group dynamics that influenced the experiences of mentee teachers.

Most TFA teachers in Mississippi do not have a formal background or degree in education. Their educational training comes primarily from the development they have received with TFA, at their placement schools, and through their own learning. Because the mentor had a teaching license and experience prior to joining TFA, then completed TFA in a different year from the mentee population, their training experiences often differed widely. Similarly, placement schools provide different forms and levels of support for TFA teachers, including those in the intervention sample. For example, some schools require that new teachers participate in regular lesson planning workshops and attend conferences related to their subject area, while others do not require formal development beyond that which they know is provided by TFA. Preparing for e-mentoring thus largely relied on activating prior knowledge and collaborative learning with mentees (Richey, Klein, & Tracey, 2011) rather than assuming that all mentees would have the same experiences, expectations, and knowledge when entering into the e-mentoring initiative. Because e-mentoring occurred in a one-to-one fashion, the mentor

tailored meetings with teachers to meet individual needs and preferences. The individualized nature of these meetings meant that mentor and teacher relationships needed to be prioritized early in the intervention. The following section outlines preparation for e-mentoring required to prioritize relationships and other preparation activities undertaken by the mentor prior to the onset of the intervention.

Specific Learning Objectives, Rationale, and Component Skills

The preparation activities for the mentor fall into four main categories: using video conferencing technology, developing mentor and mentee relationships, supporting the development of teaching skills, and supporting the development of relationship building skills. The following sections outline learning objectives and skills for mentor preparation related to each of these broader categories.

Using Video Conferencing Technology

Shrestha et al. (2009) found that the impersonality of technology can produce anxiety for mentors, so fluency with software is important to maintaining mentor engagement and efficacy. The mentor needed to learn how to create meetings using the software, to enable video cameras and microphones, to share a screen or window, to transfer files, and to coach mentees through these same activities. The mentor needed to plan for supporting mentees with using the same technology, understanding that mentee participants would have varying levels of comfort and experience with one on one video conferencing. Time needed to be built into initial mentoring meetings to make sure that mentor and mentee participants felt comfortable and fluent enough with the video technology in order to have meaningful conversations using a virtual platform.

Developing Mentor and Mentee Relationships

In order for mentoring to be successful, the mentor needed to develop relationships with mentees that were purposeful, positive, and constructive (Bland et al., 2009). A trusting relationship has been shown to be a critical component of successful mentoring (Hallam et al., 2012; Minarik et al., 2003; Smith & Ingersoll, 2004). Using a chapter from Bland et al. (2009) on establishing mentoring relationships, the mentor formulated a strategy to learn about mentees, for both mentor and mentee to share about themselves, and to find commonalities. This strategy included the mentor sharing personal experiences of being a student, of becoming a teacher, and of deciding to remain in teaching, and of asking mentees to do the same. The mentor then established a plan to co-develop with mentees a statement of purpose, ways of working together, communication expectations, and boundary setting for the mentoring relationship.

Supporting the Development of Teaching Skills

The precise teaching skills around which the mentors provided support for teachers varied according to need, grade level, content area, and so on. Regardless of individual mentoring outcomes, all sessions applied principles of adult learning in the design of mentoring sessions. To ensure alignment with TFA's principles for adult learning (Teach For America, 2017), the following objectives were considered in the design of each meeting: Mentors will design learning experiences that are continuous and sustained across multiple meetings; Mentors will elevate the centrality of learning to mentoring by providing time and resources for learning, reflection, and practice; Mentors will utilize a liberatory approach to learning that explores multiple perspectives and focuses on the development of the whole person over the covering of content; Mentors will situate mentoring as one component of the multiple learning experiences in which mentees engage; Mentors will ensure that conversations are relevant to mentees' needs by

providing opportunity for self-assessment, choice around objectives for each meeting, and connections to prior knowledge and experiences.

Supporting the Development of Relationship Building Skills

Similar to teaching skills, mentees had varying needs related to the development of relationship building skills. The purpose of these skills is for teachers to be better able to create and maintain relationships with administrators, colleagues, students' families, and other community members in their Delta schools and towns. The mentor had to consider knowledge around the ways in which teachers' racial, regional, and economic backgrounds can affect or complicate relationship building in the region (Adams & Gorton, 2006; Hyland, 2008; McCoy, 2006). The mentor prepared to discuss challenges and opportunities in regards to relationship building from her own and from mentees' experiences, discuss the historical and systemic underpinnings of these challenges and opportunities, and collaborate to generate solutions for situations directly affecting mentees and their experiences in and out of school.

Instructional Sequence

All four primary objectives were covered throughout the timespan of the e-mentoring intervention, with different levels of emphasis at various points. The following section highlights the sequence of instruction (see Appendix G). This timeline is based upon the phases of effective mentoring as described by Bland et al. (2009), as this framework applies both cognitive and social theories of learning to the specific context of mentoring rather than more traditional classroom instruction. This timeline aligns to Gagné, Wager, Golas, and Keller's (2005) processes of instruction. In early phases, the mentor linked learning to personal experiences as a novice teacher, retrieved prior knowledge, and developed strategies related to intervention objectives. In the latter phases of the project, the mentor continuously built

knowledge and skills and received feedback about performance through informal conversation with mentees. Throughout the intervention the mentor reflected on progress and objectives were revisited in order to enhance retention and transfer of the topics discussed during e-mentoring sessions. The following chapter describes implementation of the intervention, as well as a more detailed discussion of findings, conclusions, and recommendations for practice and future research.

Chapter 5

Findings and Conclusions

This chapter describes the findings and conclusions related to the effectiveness of e-mentoring for supporting TFA teacher retention in the Mississippi Delta following their second year of teaching. The participating sample of 10 TFA teachers completed a survey at the beginning of the second semester of their second year of teaching and three months later at the conclusion of an e-mentoring intervention. In their survey responses, participants described their decisions to stay in the region to teach for a third year, to move and teach elsewhere, or to leave the teaching profession completely. Participating teachers also shared information about their perceptions of e-mentoring's effectiveness at supporting relationships, building teacher skill, developing understanding of cultural context, and in supporting retention more broadly. Through a comparison of teachers' responses to these inquiries prior and following engagement in e-mentoring, several conclusions can be drawn about the effectiveness of e-mentoring for supporting TFA teacher retention in the Mississippi Delta. Though not broadly generalizable, this initial descriptive study suggests promising practices for implementing e-mentoring as a support for teacher retention. This section seeks to describe the process of intervention implementation, provide a description of and summary statements relative to findings, and provide a discussion of the findings in relationship to the literature, theoretical frameworks, and professional practice. Suggestions are also described for future research into the effectiveness of e-mentoring in other contexts and with other populations.

Process of Implementation

The e-mentoring intervention was conducted in the spring of 2019 with 10 TFA teachers in their second year of teaching in the rural Mississippi Delta and one mentor, an alumna of TFA who had taught in the region between 2009 and 2011 as well as between 2012 and 2014.

Recruitment and Sampling

In January of 2019 a recruitment email was sent by a member of TFA staff to all TFA teachers who were in their second year of teaching in the Mississippi Delta (see Appendix H). The email outlined participation requirements as well as an incentive for participation in the form of professional development credits towards a Mississippi teaching license. Because teachers were opting in to participation in e-mentoring, the study population comprised a convenience sample. Initially, 12 TFA teachers replied to the recruitment email in order to express interest in study participation. One teacher was eliminated from participation because of a placement location in the city of Jackson, Mississippi, which is outside of the rural Mississippi Delta region. Another teacher decided to withdraw from participation after determining that she had already met her professional development credits for teaching licensure. The final study sample included 10 TFA teacher mentees, all in their second year of teaching and all living and teaching in the rural Delta region of Mississippi.

Participants. Though all 10 mentees shared characteristics through their participation in TFA in the Delta in the same year, there were demographic variances within the group. The following description of participants comes from responses to demographic questions on the study's pre-survey. Five of the participants identified as male and five identified as female. Participants ranged in age from 23 to 39 years old at the start of the intervention timeframe, with a median age of 24.5. In terms of highest degree or level of education completed, 80% of

participants held a bachelor’s degree, one had completed some postgraduate work, and one had a professional or doctorate degree. One participant identified as Asian or Asian American, one as Hispanic or Latinx, two as Black or African American, and six as Non-Hispanic White. Three participants described the community in which they grew up as urban, six as suburban, and only one reported growing up in a rural community. Though the e-mentoring initiative was conducted with only a small, convenience sample of teachers all in the same TFA program, the variance reported in demographic information allows for a richer description of study findings. See Appendix I for a summary of participant demographic information for reference throughout the remainder of this discussion.

The needs assessment examining causes and factors driving TFA teacher turnover in the Delta revealed that social and geographical isolation were strong contributors to teacher attrition in the region (see Chapter 2). The existing isolation experienced by teachers in the intervention population can be illustrated through a description of where they live and teach. Table 1 names the places in which mentees were living and/or placed during the intervention period as well as those town populations as of the 2010 census and the distance to the nearest major city.

Table 1

Mentee Location Information

Community Name	Population size as of 2010	Number of mentees living in community	Number of mentees placed in community	Nearest major city	Miles to nearest city
Clarksdale, MS	17,962	5	3	Memphis, TN	77
Cleveland, MS	12,334	2	3	Memphis, TN	115
Greenville, MS	34,400	0	1	Jackson, MS	122
Leland, MS	4,481	1	0	Jackson, MS	114
Lyon, MS	350	1	0	Memphis, TN	75
Ruleville, MS	3,007	1	0	Memphis, TN	113

Sumner, MS	316	0	3	Memphis, TN	96
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Table 1 demonstrates that several mentees had chosen to live in different communities from the ones in which they were placed to teach, most notably that half of the study population (including all those placed in Sumner) had chosen to live in Clarksdale, a larger Delta community with closer proximity to Memphis and to other TFA teachers. Despite choices such as this that might mitigate feelings of isolation, all mentees still experienced some of the disadvantages associated with rural teaching such as distance from goods and services (Monk, 2007). For example, Clarksdale, the largest community in which participants were living, closed its sole Kroger grocery store in 2018, leaving Walmart as the only real option for fresh produce in a community that also does not have a farmer's market in spite of its rural location (Wright, 2018). More options for produce, quality healthcare, shopping and so on can be found in larger cities, but all participants lived and worked more than 70 miles from the nearest large city, meaning a trip of more than an hour each way given the lack of Interstate routes between the Delta and these urban centers. The example of grocery stores highlights the types of disadvantages teachers in the study population faced due to the rural locations in which they were living and working.

The other participant in the study was the mentor. The researcher served as the mentor for the e-mentoring intervention. Initial study designs included the recruitment of an outside mentor, but changes in employment required that the researcher herself serve as mentor for all mentees. Changes in employment were previously identified as a risk to study implementation in the logic model outlined in Appendix C. The mentor was an alumna of TFA, having taught as a TFA program participant on the Arkansas side of the Mississippi Delta and later as a school district employee on the Mississippi side of the same region. The mentor also previously served

as a staff member for TFA in Mississippi. Through this prior work the mentor had some name recognition among the study participants, but prior contact had been limited to events and professional development opportunities hosted by TFA in the region. In order to mitigate bias, the mentor ensured that there were no meaningful existing relationships between herself and participant teachers prior to the start of e-mentoring. To further limit bias, all mentee names were removed from pre- and post-survey responses prior to data analysis and the mentor followed the same planning and initial implementation activities with all mentees.

Attrition and attendance. Though two respondents to the initial recruitment email withdrew from participation prior to the start of e-mentoring, there was no attrition of mentees who decided to participate in e-mentoring. Attendance was a primary component of process evaluation plans (see Chapter 4). Attendance records were kept by the mentor in accordance with process evaluation plans, and all participants successfully engaged in the six required mentoring meetings. Furthermore, all participants were able to provide written responses to questions about e-mentoring following its conclusion, satisfying the other primary process evaluation question. The lack of attrition and the fulfillment of process evaluation plans help support confidence that the intervention was implemented with fidelity.

Intervention Activities

Prior to the initial e-mentoring meeting, all mentees completed a consent form agreeing to terms of participation in e-mentoring as part of a research study (see Appendix J). Participants also completed a pre-survey in the week prior to their initial e-mentoring meeting (see Appendix E).

Using the guidance of Bland et al. (2009) around the development of strong mentoring initiatives, the first mentoring meeting had the main purpose of establishing goals for mentoring

and beginning to form relationships between mentee and mentor. Mentors and mentees each shared the personal histories that brought them to teaching in the Delta, their future professional goals, and their hopes for the mentoring relationship. At the end of the first meeting, the mentor and mentee both looked at a checklist from Bland et al. (2009), which includes statements such as “There appears to be mutual interest and compatibility” (p. 69), to decide whether or not they were ready to engage in further work with one another. After looking at the checklist, mentees were given the opportunity to discuss areas in which they were not sure about responding in the affirmative, to ask questions, and to look again at the checklist. In all mentoring pairings, both the mentor and mentee left the initial mentoring meeting stating that they could agree with all components of the checklist.

During the initial mentoring meeting, the mentor shared that conversations would be confidential unless a participant shared information that might involve harm to self or others that would need to be shared. As such, meetings were not recorded and notes were only kept for the purpose of ensuring that mentees felt that e-mentoring sessions were useful for their needs and that there was continuity in conversations from meeting to meeting. For the purpose of a study into the utility of e-mentoring as a solution for rural teacher attrition, the content of individual meetings is not as relevant as participants’ reported perceptions of e-mentoring prior to and after engaging in such an initiative, the aspects of the theory of treatment (see Figure 1) they felt were most affected by e-mentoring, and the ways in which these aspects were affected during the intervention period.

All e-mentoring sessions were held using Google Hangouts, a service with the capacity for participants to see and hear each other through an internet-connected computer or mobile device. Google Hangouts also provides the capacity for users to share screens with one another,

a feature used when mentoring activities required both mentor and mentee to look at a document or resource together, such as lesson plans or student work samples. Google Hangouts was chosen because it is free to all users with a Google account, which all TFA participants are given upon placement in a region, and because it works broadly across multiple devices. Initially, meetings were going to be held using the video conferencing platform typically used by TFA. With the mentor's change in employment, however, access to this platform was no longer feasible. Mentor planning activities and initial mentoring meetings involved time for mentor and mentees to become acclimated to Google Hangouts, as this platform was unfamiliar to all participants.

E-mentoring meetings lasted one hour each and were held approximately two weeks apart. In instances where conflicts arose, such as mentee participation in afterschool programming on certain days, meetings were rescheduled within one week of the initially scheduled date. Some mentees chose to engage in e-mentoring during planning periods at school while others engaged in the evenings or on weekends. All mentees completed six total e-mentoring sessions with the mentor.

In between formal e-mentoring sessions, informal communication occurred between mentor and mentees as needed. This informal communication took place via phone, text message, and email. Mentees were asked to share their communication preferences, including format and timing for communication, during the initial e-mentoring meeting. Most informal communication was about meeting logistics, such as when the mentor or mentee wanted to reschedule a meeting or was going to be late. Other informal communication involved communication aligned to formal e-mentoring sessions. Informal communication included activities such as mentees sharing pictures of student work related to conversations that occurred

in e-mentoring meetings and text messages from the mentor offering words of encouragement for important events described by mentees. To mitigate bias that might arise from some relationships becoming stronger than others, informal communication was brief and restricted to contact explicitly aligned to the goals determined by mentor and mentees during the initial mentoring meeting.

During the final e-mentoring meeting, the mentor and mentees shared what they had each gained from the relationship and how it would influence them each moving forward. Mentees were then given a link to the post-survey and asked to complete the survey within one week of the final mentoring meeting. The following discussion of findings describes results from the pre- and post-surveys as well as a comparison of results across the two survey administrations.

Findings

Analysis of pre- and post-survey responses, as well as a comparison between the two surveys, provides descriptive information related to teachers' perceptions of e-mentoring prior to and after engaging in an e-mentoring initiative. This section seeks to describe findings related to the following evaluation and research questions:

1. What is the effect of e-mentoring on TFA Mississippi Delta teachers' intentions to stay as teachers in their placement schools, move to teach elsewhere, or leave the teaching profession following their two-year TFA commitment?
2. What aspects of e-mentoring influenced teachers' intentions to stay, move, or leave, if any?

Decisions to Stay, Move, or Leave

Results related to Research Question 1—participants' decisions for staying as teachers in the Delta, moving to teach elsewhere, and leaving the teaching profession entirely—are depicted

in Figure K1. Participant codes as described in Appendix I will be used to refer to specific participants throughout the discussion of findings. Prior to beginning e-mentoring, six participants were committed to remaining in the Delta for a third year of teaching, one had plans to move elsewhere, and three were planning to leave the profession. At the end of the e-mentoring intervention there was no change in the number of teachers choosing to stay, but three were deciding to teach elsewhere and only one had opted to leave the profession. Though the number of stayers remained the same, the group of teachers who originally described themselves as stayers did not consist of the same six participants as the final group of stayers. Of the six teachers who originally described themselves as stayers, one participant (P6) eventually decided to move to teach in a different region of the state. Of the three teachers who originally described themselves as leavers, one (P3) decided to teach in another state and one (P1) decided to stay as a teacher in the Delta. Further statistical analyses were not conducted with regards to Research Question 1. The underpowered study due to a limited sample size and the quasi-experimental design that used a convenience sample prevent meaningful statistical analysis to conclude whether e-mentoring had an effect on participant's decisions to stay in the region for a third year of teaching. Instead, further descriptive analysis of participant responses is necessary to evaluate findings related to the research questions. The remainder of this section focuses on Research Question 2 and describes how participants viewed various aspects of e-mentoring before and after the intervention, and how these changing perceptions were related to their self-described choices about staying, moving, and leaving.

The survey design included questions related to both moderator variables such as teacher place-type background and race as well as mediating variables directly influenced by the intervention (see Figure 2). Analyzing both mediating and moderator variables helps to provide

a clearer picture of what happened during the study, suggesting which specific factors drove the decisions of each of the ten participants and whether these factors were ones that could be influenced by the intervention. Of the moderator variables assessed, place-type background did not emerge as a salient factor, as the only teacher from a rural background (P1) and both teachers from an urban background (P7 and P8) were stayers at the end of the study, with teachers from suburban backgrounds distributed across all three turnover categories. Even so, other demographic information did appear connected to teacher turnover choices following the intervention.

Teacher race has repeatedly been shown to be connected to teacher attrition, particularly if there is racial mismatch between teachers and students (e.g. Hanushek et al., 2004; Renzulli et al., 2011). Indeed, both Black or African American teachers in the study population (P4 and P8) were choosing to stay for a third year at their placement schools in the Mississippi Delta, a region whose public schools are majority Black at rates typically upwards of 90%. The one Asian American participant (P2) was the sole leaver at the conclusion of e-mentoring, a finding related to a similar result in the needs assessment in which none of the teachers who did not identify as either Black or White were stayers (see Table B2). Given the small number of Asian people in the Delta, this particular racial identity could increase feelings of social isolation within a region where social dynamics are often organized along Black and White racial lines (Adams & Gorton, 2006; McCoy, 2006). Interestingly, the one participant who identified as Hispanic or Latinx (P8) was a stayer. P8 was also one of the oldest participants in the study, however, and at the age of 39 was within the age range of people most typically retained by schools (Guarino et al., 2006).

Isolation can also be geographical, and the teachers living in the two lowest population communities within the study (Lyon and Ruleville) were both choosing to move to teach elsewhere. On open responses asking why teachers were choosing to stay, move, or leave, P10, who was living in Lyon, wrote: “I love teaching. I have never been more fulfilled in any other career than teaching, but I miss my family in [another state] and want to be close to them.” P3, who was living in Ruleville, wrote that he was leaving due to “Lack of opportunities for professional advancement/no jobs in the area for my partner.” Both of these teachers had positive perceptions of e-mentoring and even stated that it could effectively help someone choose to stay in the Delta, but P3 wrote, “I think that if I was not compelled to leave for reasons beyond my own personal motivation...[e-mentoring] could have helped considerably.” These responses show that, even as e-mentoring could address mediating variables like teacher skill and relationships, e-mentoring was not enough to overcome some turnover decisions more closely related to moderator variables like race and location. Like any other educational intervention, it is unlikely that e-mentoring will effectively work for all teachers and in all contexts, particularly when external factors are also driving their choices. Even so, there were shifts in teachers’ rationale for staying, moving, and leaving between pre- and post-surveys as well as shifts in perceptions of e-mentoring in ways that show that this intervention still holds potential for increasing teacher retention. The following sections describe the factors affected by e-mentoring in greater detail in order to better understand why and in what ways e-mentoring can be useful for promoting teacher retention.

E-mentoring and Relationships

Participants in the e-mentoring initiative shared their perceptions about the effectiveness of e-mentoring to support three sorts of relationships by rating responses to the following

statements from one (strongly disagree) to five (strongly agree) on Likert-type scales: (1) I can build strong relationships with an e-mentor; (2) I can build stronger relationships with my school leader as a result of e-mentoring; and (3) I can build stronger relationships with my colleagues at school as a result of e-mentoring. When comparing responses on pre-and post-surveys, the mean response to all three questions was higher following the e-mentoring intervention than prior to the start of the intervention (see Figure K2). When asked to describe the benefits of e-mentoring, pre-survey responses only mentioned the convenience of technology and the potential to build a strong relationship with an e-mentor. On the post-survey, however, responses included both of these as well as thoughts related to relationships with school leaders and colleagues, the development of teaching skill, and opportunities for self-reflection. The following discussion of findings will describe both quantitative and qualitative responses about each of these relationship types, including through a description of responses as relates to participants' decisions to stay, move, and leave.

Relationships between mentee and mentor. Both before and after the e-mentoring initiative, both the median and mode responses to the statement “I can build strong relationships with an e-mentor” were five, or strongly agree. There were no meaningful differences in responses to this statement across stayers, movers, and leavers. There was an increase in the mean response between the pre-survey mean of 4.5 and the post-survey mean of 4.9. On post-survey responses, the sole participant who rated this statement a four, or somewhat agree, was choosing to remain teaching in the Delta after their two-year TFA commitment. Figure K3 shows quantitative responses to this statement on both pre- and post-surveys.

By coding responses to open-ended questions, mentor relationships emerged as a theme across responses related to positive aspects of e-mentoring. When asked to describe the benefits

of e-mentoring prior to the intervention, only four out of ten participants cited relationships as a benefit. On the mentoring post-survey, however, four out of six stayers and two out of three movers described the relationship built between themselves and the e-mentor as a benefit of e-mentoring. The one leaver did not describe such relationships as a benefit of e-mentoring. There was also a change in the amount and specificity with which people described a mentor relationship between the two survey administrations. Pre-survey responses about this relationship were brief and non-specific, as exemplified by the following response: “Working with other people is always useful.” Post-survey responses, however, were longer and provided details about why participants felt that they could build a strong relationship with an e-mentor. For example, the following is an excerpt from P3’s response: “Establishing a personal, professional relationship was really helpful for me. The lack of formal requirements/assignments, and the informal, self-directed accountability was really nice. Having somebody that you can check in with, no questions asked, really made me feel supported instead of *monitored*.” P1, who was originally planning to leave the profession but decided to remain at her placement school following the intervention, wrote that a benefit of e-mentoring was “feeling seen/heard by someone who offers advice and seeks to understand.”

Participants also provided information about their perceptions of e-mentoring and building relationships with a mentor in response to an open-ended question about the greatest drawbacks of e-mentoring. On the pre-survey, eight of the ten participants described concerns about the possibility of building a strong relationship with an e-mentor. P7 wrote, “The e-mentoring program could be unsuccessful if both participants cannot form a healthy relationship, if both participants do not learn from each other, and if both do not fully commitment [*sic*] to the values of e-mentoring.” More of these pre-survey statements, however, described concerns with

the virtual nature of the e-mentoring relationship. In a representative pre-survey comment, P4 wrote that a drawback of e-mentoring is the lack of “personal connections that you get in person.” On the post-survey, however, none of the responses described drawbacks of relationship-building related to the virtual nature of the relationship, suggesting that any existing fears or concerns that an e-mentoring relationship would be less personal did not bear out in the actual e-mentoring experience. Indeed, P10 wrote that a “benefit of e-mentoring is that it is very convenient. I didn't have to go anywhere to get [my mentor's] unique and valuable expertise. I could sit right in the comfort of my home.” Two participants expressed concerns on the post-survey, however, that even though they had built a positive relationship with their e-mentor, future e-mentoring could be harmed if relationships were not built. In describing drawbacks of e-mentoring P4 again wrote, “Like any other relationship, personalities, trust, etc. has to be built.”

Comparing participants' written responses about their perceptions of e-mentoring and relationship building demonstrates that, even though most participants had a positive perception of their ability to build a strong relationship with an e-mentor prior to the intervention, those perceptions had strengthened after the conclusion of e-mentoring. Following the intervention, teachers were better able to qualitatively explain why they strongly agreed with the belief that they could build a strong relationship with an e-mentor. Participants also described a belief that a positive e-mentoring relationship is necessary for any other part of e-mentoring to be successful. P3, a mover, wrote the following in response to the post-survey question asking if there was anything else they would like to share about e-mentoring: I “really think that establishing a reciprocal relationship FIRST is going to be crucial to the success of E-mentorship.”

Relationships between mentee and school leaders. Prior to the start of e-mentoring, the modal response to the statement “I can build stronger relationships with my school leader as a result of e-mentoring” was four, or somewhat agree. On post-surveys, however, responses were bimodal with the same number of participants rating a four as a five, or strongly agree. Mean responses to this statement increased across the intervention period, growing from a 3.9 to a 4.2. Figure K4 illustrates quantitative responses to this statement on both pre- and post-surveys. On pre-surveys, two out of the three participants who indicated that they would be leavers responded to this statement with a two, or somewhat disagree. By the end of the intervention there was only one leaver, who rated this statement as a five. On the post-survey, two stayers rated this statement a three, or neutral. No participant gave a rating somewhat or strongly disagreeing with this statement in their post-survey responses.

No participants mentioned relationships with school leaders in their pre-survey open response answers. Only P1, a stayer, mentioned this relationship on the post-survey by writing that a benefit to e-mentoring is “getting fresh perspective from an outsider on issues such as my struggle to build relationships with my principal/other teachers at school.” Despite the slight quantitative increase in responses between pre-surveys and post-surveys, this was the only mention of relationships with school leaders in written responses to either survey. Interestingly, P1 was also the only participant who was planning to leave the profession prior to the intervention but who was planning to stay by its conclusion.

Relationships between mentee and colleagues. On both pre- and post-surveys, both the median and mode responses to the statement “I can build stronger relationships with my colleagues at school as a result of e-mentoring” were a four, or somewhat agree. The mean response increased from a 4.0 on the pre-survey to a 4.3 on the post-survey. On the pre-survey,

one leaver responded to this statement with a two, or somewhat disagree. On the post-survey, one stayer responded with a three, or neutral, while all other participants responded with a four or a five. Figure K5 illustrates quantitative responses to this statement on both pre- and post-surveys.

No participants mentioned collegial relationships in their responses to pre-survey questions. On the post-survey, however, three participants (including two stayers and one mover) mentioned relationships with colleagues at school as benefits for e-mentoring. One of these comments came from P6, who explicitly mentioned challenges with building relationships because of the unique cultural context of the Delta and that having an e-mentor who had similarly come to the Delta was important to the perception that e-mentoring could help support stronger relationship building at school. P6 wrote that part of this benefit was having a mentor “who also was in a similar situation and had to adapt to a different culture in the Delta.”

E-mentoring and Teacher Skills

The e-mentoring intervention also sought to describe the relationship between teacher turnover and their perceptions of e-mentoring’s effectiveness for supporting the development of their teacher skill. On pre-surveys, teacher skill was the second most commonly described benefit of e-mentoring after building a relationship with the e-mentor, with four teachers describing teacher skill in their written responses. P5 wrote on the pre-survey that the greatest benefit of e-mentoring is “quick access to knowledgeable help in managing and creating a strong classroom culture and environment.” On the post-survey, seven out of the ten participants described the development of teacher skill as a benefit of e-mentoring. Similarly, the mean response to the statement “I can improve my teaching skill as a result of e-mentoring” on a five-point Likert-type scale increased slightly from a 4.5 on the pre-survey to a 4.8 on the post-

survey. Figure K6 illustrates the number of participants who rated this statement at each point on the Likert-type scale on the pre- and post-surveys.

Following the intervention, seven out of ten participants described benefits related to their teacher skill as a result of e-mentoring. These responses tended to be more specific than the description of benefits written on pre-surveys. P5, who wrote the general comment above about wanting help in terms of classroom culture, wrote, “The greatest benefits I received were the tools and tips that she provided me for my [change in teaching subject area over the e-mentoring period] and the talks we had about the behavior of my children.” Twice, the benefit of e-mentoring as related to teacher skill was described precisely because the conversation was happening within a mentoring relationship as opposed to with a boss or supervisor, as exemplified by P1’s response about the benefits of e-mentoring: “Consistent time and space for reflecting on teaching without the pressure of TFA coaching or school administrator outcomes at the forefront.” Similarly, P3 wrote, “The lack of formal requirements/assignments, and the informal, self-directed accountability was really nice.”

Other post-survey responses were more specific about the practices that had been influenced through e-mentoring. P10 wrote that a “benefit to e-mentoring is that it helped me set goals tailored to me, and [mentor name] acted as a sort of accountability buddy. I told her I wanted to do more hands on math projects with a real world context in the classroom, and we made fraction pizzas. I told her I wanted to get my kids more involved in the community, and we went on a canoe trip down the Sunflower River.” This example illustrates the specific ways in which the teacher felt that e-mentoring had been empowering for trying out new strategies and activities as a teacher and that these actions were seen as beneficial.

Other benefits related to teacher skill included comments related self-efficacy and self-reflection, though questions about these two concepts were not explicitly asked on the surveys. P5 wrote, “Too often I focus on the growth that needs to happen instead of the growth that I’ve already had, and [mentor name] had a great impact on my own self-efficacy.” Within the theme of self-reflection, two teachers compared e-mentoring to therapy. P8 wrote, “I think the greatest benefit of the e-mentoring was the therapeutic value of it. I always left the session always feeling a little bit better about myself.” At the end of e-mentoring, all participants either agreed or strongly agreed that they could improve their teacher skills, which included their overall sense of wellbeing in relation to being a teacher, as a result of e-mentoring.

E-mentoring and Decisions to Stay, Move, or Leave

Although the small sample size meant that meaningful statistical analysis could not be conducted to determine whether or not e-mentoring quantitatively affected teachers’ decisions to stay, move, or leave, responses to survey questions provide qualitative, descriptive data about the relationship between e-mentoring and teacher turnover. Teachers were given the following open response question on both their pre- and post-surveys: “Do you believe that e-mentoring can influence your decision to stay, move, or leave at the end of this year? Why or why not?” By coding responses to this question, it emerged that five out of the ten teachers on the pre-survey believed e-mentoring could have an influence on their decisions to stay, move or leave, while eight out of the ten teachers believed it could have an influence in their post-survey responses. The following description shares representative comments from pre- and post-survey responses.

Prior to the start of the e-mentoring intervention, three out of ten teachers were planning to leave the teaching profession entirely after their two-year TFA commitment. Of these, two out of three did not believe that e-mentoring could influence their decision. P3 wrote, “A lot of my

reasons for leaving are geographical; I'd imagine that e-mentoring could improve my experience of teaching but it won't be able to address some of the underlying personal/professional reasons I need to move on next year.” P2 wrote that e-mentoring having an influence on turnover would be, “Very unlikely. I'm exhausted and would prefer to be in a calmer more analytical setting.” Unlike P3 and P2, however, P1 indicated that she was planning to leave the profession but wrote of e-mentoring, “Yes I think it has the potential to influence my thinking on staying/leaving because it could offer some fresh perspective on the topic from someone outside of the TFA/my school circle.” By the end of the intervention, only P2 was still choosing to leave the profession after their two-year commitment. Even so, this person had a positive perception of e-mentoring's ability to influence turnover: “Yes. The thoughts about leaving come from the difficulty of teaching. E-mentoring is an effective way of getting feedback and encouragement that pay off in the classroom.” Despite this belief, however, the person was choosing to leave because “I don't think it's what I'm best equipped to do to contribute to the things I care about.”

Both before and after the intervention, four out of six stayers indicated a belief that e-mentoring could influence turnover decisions. Statements from teachers who disagreed with this belief were consistent across the intervention period. For example, P4's pre-survey response of “No, I have preset notions to why I would stay or go unrelated to teaching goals” and P8's post-survey response of “I think I was already set to stay before deciding to do e-mentoring” indicate that these participants had already decided that they would be staying as teachers in the Delsta and did not feel that e-mentoring could influence those decisions. Other stayers said they already were leaning towards staying, but e-mentoring strengthened their resolve. For example, P5 wrote on the post-survey, “I think that I was already fairly certain about staying, but [e-mentoring] helped me to prepare my classroom and organize my thoughts [as a] teacher...By

making my job a bit easier [mentor name] certainly helped my choice in staying.” P1 wrote, “There is a good chance I would have stayed with or without e-mentoring, but [it] had a big influence on the way I became more comfortable with my decision to stay... The hour-long sessions allowed for more meaningful reflection than I had been able to get to in conversations within TFA and helped break my cycle of doubt about staying or leaving.” P1 had described herself as a leaver on the pre-survey. This post-survey reflection indicates that P1 was originally planning to leave but had remained open to staying, and that e-mentoring helped to solidify that choice, rather than changing the mind of someone completely set on leaving.

On the pre-survey P10, the one participant who planned to move to teach elsewhere, did not believe that e-mentoring could have an influence on turnover. P10 wrote, “I am always open to change although even though I love the Delta, I doubt anything will change my mind as I miss my family dearly.” P10 was still a mover at the end of the intervention and was joined in this decision by P3 and P6. On the post-survey, all three of these movers stated a belief that e-mentoring could have a positive influence on turnover even though they also described similar external forces driving them to move to teach elsewhere. P10’s post-survey response illustrates the ways in which participants described a similar rationale for moving to teach elsewhere prior to and after e-mentoring, even as their perceptions of e-mentoring’s ability to influence turnover shifted: “I believe that e-mentoring can influence one’s decision to stay, move, or leave at the end of the year. In my case, leaving was non-negotiable because my family is back in [home state].”

The e-mentoring intervention was conducted during the second semester of teachers’ second years with TFA in the Delta. Although there were some qualitative changes in turnover prior to and after e-mentoring, several teachers described a belief that e-mentoring could have a stronger influence on turnover if it had occurred earlier in their tenure with TFA. P8 wrote on

the post-survey, “I think I was already set to stay before deciding to do e-mentoring. I think this program could work well with first year teachers much more effectively.” Though not explicitly writing about turnover, P5 echoed this sentiment by writing, “I wish that we had started this two years ago! It felt much more personalized than the other programs that TFA provides.” In an overall analysis of responses to the question about e-mentoring’s ability to affect the choice to stay, move, or leave, participants reported that e-mentoring had a positive influence on their turnover decisions. At the same time, many of these decisions were already fairly set prior to the start of the intervention. E-mentoring helped to solidify decisions to stay or to encourage people who were wavering between leaving and staying or moving rather than shifting mindsets entirely. Following the advice of P8 and P5, the application of e-mentoring earlier in teachers’ two-year commitment with TFA would likely have a stronger effect if implemented before teachers’ decisions about turnover had already been made. The following discussion builds upon this analysis with further implications for future implementation and connections to practice.

Connections to Broader Practice

The e-mentoring intervention did not increase the number of teachers staying to teach for a third year in the Mississippi Delta prior to and after the intervention, although only one teacher was choosing to leave the profession after the intervention as compared to three planning to leave before it began. At the same time, teachers’ perceptions of various components of e-mentoring shifted across the intervention period, including their perceptions of e-mentoring’s effectiveness for supporting decisions to stay. In particular, teachers’ perceptions of e-mentoring improved in regard to building a relationship with an e-mentor and in the development of their teaching skill. These were also the two areas about which teachers were most open to e-mentoring prior to the intervention. Analysis of participant data provided less evidence to

demonstrate a shift in perceptions of e-mentoring as related to building relationships with school leaders and colleagues at school. In general, survey responses from participants demonstrate a shared belief that e-mentoring can effectively encourage TFA teachers to stay for a third year of teaching in the Mississippi Delta, with a belief that earlier implementation of e-mentoring within the trajectory of TFA development would be more effective.

Overall, teachers expressed some skepticism about e-mentoring prior to the e-mentoring intervention and positive attitudes about e-mentoring following its conclusion. Two particular survey responses demonstrate this shift over time. On the pre-survey, P3—initially a leaver—wrote: “I would worry that an e-mentoring model for teacher training could quickly become corporatized (similar to the bloodsucking professional development contractor industry) and teachers would wind up with a bunch of half-assed mentors/video modules/certification “accountability” schemes that would essentially just create another layer of paperwork in the place of the good 1-on-1 teacher training we need...” This response indicates that the participant not only was skeptical about e-mentoring but also had reservations about the broader field of teaching and the corporatization of the field. By the end of e-mentoring, P3 was no longer choosing to leave the profession but was moving to teach elsewhere, writing, “The lack of formal requirements/assignments, and the informal, self-directed accountability was really nice. Having somebody that you can check in with, no questions asked really made me feel supported instead of *monitored*. I wanted to complete my goals because I wanted to have something to bring to the table, not because I was compelled to do it.” This response indicates that e-mentoring felt purposeful to the teacher and challenged prior assumptions about the form and function of teacher development through TFA and more broadly. The comment also suggests that e-mentoring as a support structure includes an element of flexibility for tasks to be determined by

individual's needs and preferences, and that such flexibility might not have been part of this teacher's perception of professional development prior to e-mentoring. While the teacher did not choose to remain teaching in the Delta, these responses indicate that e-mentoring might have played a role in swaying this person's decision to remain in the profession rather than give up on teaching entirely.

Prior to the intervention P2, the only person who was still a leaver after e-mentoring, explained the choice to leave in the following way: "I do not feel as effective as I believe I could be in another role." This statement indicates a lack of teaching self-efficacy, a condition that has been repeatedly linked to teacher attrition (e.g. Hanushek et al., 2004), particularly from schools that they perceive as having challenging working conditions (Yost, 2006). By the end of the intervention, this sole leaver explained the choice to leave in similar terms: "I don't think it's what I'm best equipped to do to contribute to the things I care about." Notably, however, the pre-survey response focused on deficit and not feeling effective, whereas the post-survey response framed this same feeling in terms on having strength and being equipped to do well in other areas. This shift in focus from deficit-thinking to asset-based thinking that emerges from these responses is subtle, but the responses indicate a change in how the teacher thought about self-efficacy over time. If e-mentoring had been implemented earlier in this teacher's career and had been consistent across the two-year commitment, it is possible that the initial sense of lack of teaching self-efficacy would not have solidified. Indeed, this leaver described his experience of e-mentoring in the following way: "It was tremendously enriching outside of just teaching. It was something I looked forward to every time without fail. It was a very good space to parse through my thoughts and feelings about teaching, education, and even my life in general." These comments illustrate the ways in which "thoughts and feelings about teaching, education, and

even... life in general” all contribute to the ways TFA teachers understand their experiences and make choices about staying, moving, or leaving. P2’s pre-survey comment focused explicitly on teaching and not feeling effective in a teaching role. By the end of the intervention, the teacher’s comments expanded to include discussion not only of teaching but of the broader field of education and on life outside of teaching. Returning to the concepts of EST and triadic reciprocity, e-mentoring influenced this teacher’s understanding of the broader network of causes and factors affecting his professional and personal experiences while part of TFA in the Delta.

Following the intervention, P2 described e-mentoring and his decision to leave not only by describing teaching itself but also by describing how e-mentoring helped him think about work and life outside of teaching. P2’s post-survey comments not only focus on feelings of effectiveness about teaching but also acknowledge that he might be successful in other areas. As Bandura (1977) writes, “Efficacy expectations...differ in generality. Some experiences create circumscribed mastery expectations. Others instill a more generalized sense of efficacy that extends well beyond the specific treatment situation” (p. 194). In other words, P2’s comments suggest that e-mentoring can help teachers better understand the range of thoughts and feelings they have related to their experiences in a teaching setting, situate these thoughts and feelings within the broader field of education and their personal lives and goals, and support their understanding that low self-efficacy for one activity does not mean low self-efficacy in others, instilling a “more generalized sense of efficacy.” P2’s comments suggest that better understanding the relationship between e-mentoring, self-efficacy, and teaching self-efficacy specifically would support a better understanding of the ways in which e-mentoring could be useful for supporting retention. Both pre- and post-survey comments suggest that P2 was

leaving the profession because of a feeling of low teaching self-efficacy, and that this lower teaching self-efficacy was present before the start of the intervention. If e-mentoring can positively influence teaching self-efficacy, as suggested by P5's comment that e-mentoring had a meaningful effect on his teaching self-efficacy, then earlier access to a mentor could have had an effect not only on P2's more general self-efficacy but on teaching self-efficacy specifically and, by extension, on retention.

Discussion

Since the initial needs assessment (see Chapter 2) focusing on the causes and factors driving TFA teacher attrition in the Mississippi Delta, additional research has emerged that highlights the problem of attrition among all types of teachers and in regions across the US. Sutchter, Darling-Hammond, & Carver-Thomas' (2019) analysis of teacher shortages looked at trends and factors driving demand for teachers, rates of new teachers entering the field, and attrition due to numerous factors. They found that the gap between teacher supply and demand is growing as fewer people are choosing to enter the profession while attrition rates continue to rise. Returning to Ingersoll's (2002) metaphor for understanding the need for both teacher retention as well as new entrants to the field, more holes are being punched in the bucket just as fewer are being patched. Solutions aimed at retaining as many existing teachers as possible are thus more important than ever. E-mentoring is one possible, low-cost solution to help ameliorate teacher attrition that could be implemented in contexts across the US.

The following discussion describes the findings of the e-mentoring intervention for second year TFA teachers in the Mississippi Delta in relationship to the research literature, theoretical frameworks, and broader professional context. By relating findings to broader contexts, recommendations can be made for implementation of future e-mentoring in the region

and for future researchers and practitioners seeking to implement a similar initiative in other regions and with other populations. In order to strengthen this discussion, this section also includes a description of limitations of the intervention study and recommendations for future research.

Connections to Research Literature

Analysis of participant survey responses showed that relationships with a mentor were most frequently described as a benefit of e-mentoring both before and after the intervention, with stronger positive beliefs appearing in post-survey responses. This finding is consistent with research literature (e.g., Hallam et al., 2012; Odell & Ferraro, 1992; Smith & Ingersoll, 2004) suggesting that teachers value the relationship they form with a mentor as the most valuable aspect of mentoring. Given that one of drivers of TFA teacher attrition in the rural Mississippi Delta is the feeling of isolation (see Chapter 2), a strong e-mentoring relationship could positively influence a teacher's sense of social wellbeing. In Minarik et al.'s (2003) application of system's thinking to their analysis of teacher turnover, the authors describe feelings of isolation as a factor driving attrition across the teaching population and suggest that relationships within a teacher's context, but not necessarily in the same school building, could positively affect that teacher's sense of wellbeing and thus their willingness to remain in the profession. Similarly, teachers who participated in the e-mentoring intervention described their time talking to a mentor using language that described a meaningful, almost therapeutic relationship that contributed to an overall sense of wellbeing. The only leaver at the end of the e-mentoring intervention did not describe relationships as a positive of e-mentoring, another finding that supports the claim that relationships are central to successful e-mentoring for the purpose of increasing teacher retention. The fact that relationships between e-mentor and mentee in the

intervention did not occur in a face to face setting was a source of nervousness for teachers prior to the intervention, but not considered a drawback following the intervention. Consistent to findings described in the broader research literature (e.g., Bierema & Merriam, 2002; Murphy, 2011; Rowland, 2012; Watson, 2006), teachers who participated in e-mentoring valued the relationships built with their mentor despite the lack of face-to-face proximity.

Teachers did not describe the change in their perception of e-mentoring's effectiveness for supporting relationships between themselves and their school leaders or colleagues to the same extent that they discussed direct relationships with the mentor, but there was still a small, positive change in perceptions of these relationships before and after the e-mentoring intervention. P1 was the only teacher who mentioned relationships with school leaders and colleagues, explicitly stating on the post-survey that e-mentoring had supporting her actions in strengthening these relationships. P1 was also the only person who changed from being a leaver at the start of the intervention to a stayer after the intervention. Murphy (2011) suggests that a mentoring relationship can positively influence a teachers' perceptions of and relationships within their school community, and findings related to the e-mentoring intervention, particularly P1's comments, could be viewed in support of this claim. There is a general dearth of literature about the efficacy of e-mentoring for supporting the development of other relationships, and the lack of clear findings in this same area after the e-mentoring intervention suggests that this is one area for potential future study.

After relationships, the area next viewed as most beneficial by participants in the e-mentoring intervention was the development of their teaching skill. Smith and Ingersoll's (2004) seminal study on the relationship of mentoring and teacher retention suggested that having a mentor in the same subject area as the teacher was most beneficial for improving teacher

retention. The e-mentoring intervention did not meet this condition, but, following the intervention, all teachers agreed or strongly agreed that e-mentoring could have a positive influence on their teacher skills. Instead, teachers described other shared experiences with their mentor which included but were not limited to working in the same subject areas. Building on Smith and Ingersoll (2004), then, findings related to the e-mentoring intervention suggest that having some shared experience or affinity with an e-mentor can have a positive influence on the development of teacher skill even if the mentor and mentee do not work in the same subject area. E-mentoring might have its most meaningful effect on the development of teacher skill through its support of teacher self-efficacy. In teachers' post-surveys, seven of the ten participants described changes they made in their practice or feelings of confidence related to their practice as a result of e-mentoring conversations, and one teacher explicitly named the positive effects of e-mentoring on self-efficacy even though this term was not used on the survey instrument. This finding aligns with Anthony et al.'s (2011) finding that teachers who participated in bi-weekly e-mentoring, the same cadence at which the teachers in the intervention participated, had measurable increases in self-efficacy and also reported growth in their teaching skill.

The intervention was designed with an understanding of theories of triadic reciprocity (Bandura, 1986) and EST (Neal & Neal, 2013), including the belief that an e-mentor would be just one component of the broader network of social, environmental, and cognitive factors in which teachers live and work. Bandura (1986) notes that behavior is influenced by personal and environmental factors, as well as how people think about those factors. The e-mentoring intervention was designed with the knowledge that TFA and similar organizations cannot alter most personal or environmental factors for their participants but that an e-mentor can affect their thinking about such factors. For example, the teacher who described on the pre-survey a fear

that e-mentoring could become a prescriptive, transactional box to check as part of certification was responding to environmental factors in a way that negatively influenced perception of e-mentoring. Findings from the conclusion of e-mentoring, however, demonstrate that all teachers had a positive perception of e-mentoring, as well as its ability to affect their perceptions of themselves and their environment. It is less clear whether or not these positive cognitive perceptions are enough to overcome the role that personal and environmental factors play in teacher turnover decisions.

The research literature suggests that teacher characteristics including age, race, and place background all affect turnover. In responses to e-mentoring surveys, place background emerged as the only one of these factors that teachers explicitly discussed. As Boyd et al. (2005) demonstrate, teachers tend to prefer working and teaching in their home communities or communities like their homes over different communities. P10, a mover, described strong, positive perceptions of e-mentoring and a belief that it could influence turnover decisions, but still chose to move because of family in another state, writing: “If my family was not in the equation, e-mentoring has helped me set goals and put the bad days in perspective, therefore making it more likely that I will continue teaching.” This finding demonstrates that the draw of home or place-type background, one of the moderator variables measured and described in Appendix H and which is a combination of personal and environmental factors, can still overpower the positive benefits of e-mentoring as related to cognition about such factors.

Limitations and Areas for Future Study

Limitations of the study center around generalizability, or the ability to apply findings of this study to other populations and contexts. First, this study had a small sample size of only ten teachers, meaning that it is impossible to quantify the extent to which e-mentoring affected

turnover decisions or which aspects of e-mentoring held the most weight. Similarly, the small sample size means that the qualitative experience of just a handful of teachers were interpreted and extrapolated to draw conclusions about the broader group. This small sample was also a convenience sample, meaning that teachers were not randomly selected but instead opted in to participation in the study. It is therefore impossible to conclude whether e-mentoring itself produced whatever shifts occurred prior to and after e-mentoring, if the teachers who joined were predisposed to this same level of growth over the same time period, or if there were other unforeseen factors at play. This type of sampling means that findings from this study are descriptive at best.

Another limitation of the study was that all mentees engaged with the same e-mentor. On the one hand, having the same mentor meant that participants had a generally uniform experience of e-mentoring. On the other hand, this meant that some mentees got to work with an e-mentor who had taught in the same subject area as a matter of happenstance, while others were with an e-mentor who had no prior experience in their subject areas. Given that subject area matching is an important condition of mentoring as described by Smith and Ingersoll (2004), mentees had different experiences of e-mentoring with this factor in mind. The survey instrument did not account for the extent to which subject area matching might have had an influence on teacher turnover. Any larger scale implementation of e-mentoring would require the recruitment and training of multiple mentors, and meaningful professional development and process evaluation would need to be designed, monitored, and potentially adjusted in order to ensure that all mentees receive a consistent and high-quality experience of e-mentoring that meets the necessary conditions described above. In particular, findings from the intervention study show that mentors would need to be adequately prepared to build trusting, collaborative, and genuine

relationships with mentees. Bland et al.'s (2009) guide offers useful resources and development for the preparation of mentors in building effective mentoring relationships.

A related limitation is that the e-mentor was also the researcher, a factor that might have introduced bias into the process of e-mentoring. Though the e-mentor intentionally prepared for sessions in a hope to mitigate this limitation, it is impossible to know the extent to which unintentional bias might have contributed to unintended outcomes. Again, future research would need to determine what sorts of professional development would be needed to effectively prepare other mentors. In the context of this study, the researcher used prior knowledge and experience in the field of new teacher preparation in order to plan for and engage in e-mentoring sessions, but future mentors might not have the same background and would likely need initial and on-going support and development. For larger scale initiatives, too, this professional development would need to be codified and monitored in order to guarantee a consistent level of quality across mentor-mentee pairings and over time. Related to this limitation is that mentoring only occurred in a one-on-one context, so future research should explore possibilities of group mentoring or support networks for mentees to connect outside of mentoring sessions.

The final primary limitation of the study is the distinct contextual specificity in which the study occurred. While Morris and Monroe (2009) make the case for studying the US South within its particular context, this same argument could be used to state that studies in the US South are bounded by place and cannot be generalized to other contexts. Add to that the other unique characteristics of the study context (i.e., all participants were part of TFA, all participants were not from but were teaching in the Mississippi Delta, all participants were in the second semester of the second year of teaching), and generalizability is further impeded. Many

participants themselves noted that e-mentoring might have been more effective if it had occurred for a longer period of time and had begun during their first year of teaching.

Given the limitations related to generalizability, future research should be conducted to conclude whether the descriptively positive results of the e-mentoring intervention could have a measurable effect on TFA teacher turnover in the Mississippi Delta. Although teachers were able to state a belief that e-mentoring could positively influence them to stay in the Delta for a third year following their TFA commitment, future research is needed to determine whether or not e-mentoring truly would have an influence. Any future research conducted with this population should include a larger, randomly selected sample population, should recruit mentor teachers with same subject-area experience as mentees, and should occur during teachers' first year with TFA.

Additionally, future research is necessary to determine whether e-mentoring can influence teacher turnover outside of the context of TFA in the Mississippi Delta. The results of the e-mentoring initiative suggest that this virtual technology could be useful for overcoming some of the isolation related to rural teaching, as teachers did not describe technology as a barrier to meaningful relationships at the conclusion of e-mentoring. Next steps would include the study of e-mentoring interventions for teachers in other rural communities across the US, as well as in other communities where isolation is found to be a factor driving teacher attrition. Given the relative dearth of research literature specifically focused on rural education (Arnold et al., 2005), such future research could produce meaningful contributions to the field. Future implementation of e-mentoring should also occur earlier in teachers' careers rather than towards the end of a time period in which a major turnover decision is already anticipated. For TFA teachers in particular, the two-year commitment is a given from the start. Analysis of pre- and

post-survey responses suggests that e-mentoring can help strengthen the decisions of teachers who are not already set in their decision to stay, move, or leave. Perhaps one of the most important trends in analyzing survey responses is that in no case was e-mentoring seen as a negative in terms of supporting a decision to stay. This trend suggests that the implementation of e-mentoring early in the two-year commitment, before teachers have made up their minds about what they would like to do following their second year, could contribute to a net positive increase in the proportion of TFA teachers who remain in the Mississippi Delta after their second year. In sum, the e-mentoring intervention found that a meaningful e-mentoring pairing, surrounded on relationship building and the development of teaching skills, can have a positive effect on mentees' experiences of and perceptions of teaching, but the true extent of these effects is inconclusive.

Implications for Practice

The findings of this study offer suggestions for implementation by education practitioners, policy makers, and funders. Practitioners include schools of education, alternative route teacher preparation programs, school and district leaders, and other educators with a role in recruiting and retaining new teachers. The central conclusion of the study of an e-mentoring intervention aimed at promoting teacher retention was that e-mentoring was seen as most effective when it emphasized relationship building for the teacher. Consistent with findings in the research literature (Schlichte et al., 2005; Wadell, 2010), teachers at the start of their careers, such as those in the intervention group, typically desire a sense of belonging both in terms of personal relationships and as a new member of the teaching profession. E-mentoring can support this sense of belonging on both the personal and professional levels and support the teachers' integration into the broader community of professional teachers. Analysis of survey responses

following the e-mentoring intervention suggest that early implementation of e-mentoring would have the strongest positive influence on teachers' feelings of belonging and, by extension, their willingness to remain in their schools and in the profession in the long-term.

Policy makers also have an interest in retaining the existing teaching force in greater numbers, as the continued reality of teacher shortages in regions of the country hurt overall student outcomes and strain existing resources (Darling-Hammond, 2003). While grow-your-own initiatives have perhaps the strongest potential for increasing teacher retention (McClure & Reeves, 2004; Monk, 2007), these programs are costly and will take time to develop, evaluate, and implement broadly. In the interim, policy makers can create structures or offer incentives for e-mentoring, a less costly and easier to implement solution for teacher retention. E-mentoring initiatives could be run by schools and districts themselves with state funding offering incentives for veteran educators to serve as mentors. Alternatively, e-mentoring programs could be run by state universities and continuing education programs with an interest in retaining teaching graduates in the field. Policy makers who are concerned by teacher shortages can support practitioners by creating the conditions and incentives by which e-mentoring programs can be designed and implemented.

Like any new initiative in education, the creation and implementation of e-mentoring includes costs. In particular, a large-scale e-mentoring program would require the hiring and payment of program designers and managers as well as incentives for educators who serve as mentors. Funders looking to support e-mentoring initiatives should evaluate such programs for the following conditions. First, e-mentoring should heavily emphasize relationship-building between the teacher and mentor. Second, e-mentoring should support the development of teachers' professional skills in ways that are adaptive to individual needs and contexts, rather

than according to a prescribed program of training. Finally, e-mentoring should support teachers' integration into their broader communities by supporting relationships with their school leaders, colleagues, students, and students' families. Funders interested in combating high rates of teacher attrition should seek out e-mentoring initiatives that meet these criteria, as the results of this study suggest that such initiatives hold the greatest promise for supporting teacher wellbeing and retention at a relatively low cost.

Conclusion

E-mentoring is still a relatively new and unexplored topic in the field of education, and though there is much yet to be learned about best practices for its use beyond this small-scale descriptive study, it holds potential for future practice. E-mentoring is cost-effective and can easily be adapted given teacher and mentor schedules, existing priorities, areas of interest, and so on. Participation in e-mentoring could also be linked to alternative certification programs, including but not limited to TFA, that are helping address the problem of decreasing enrollment in traditional teacher preparation programs described by Sutchter et al. (2019). Higher education institutions could offer Continuing Education Units (CEUs) for those who are already certified for participating either as mentors or mentees, depending on interest and need. These examples illustrate how e-mentoring can be easily linked to existing structures within the field of education and support higher rates of retention, as compared to other interventions that require a greater overhaul of the system, such as potentially more promising but also costly and time-consuming grow-your-own initiatives. As shown in the study of TFA teachers in the Mississippi Delta, e-mentoring alone cannot address all factors that contribute to teacher attrition, but in some cases can sway a teacher's decision to stay or at least solidify the decision of a teacher who is wavering.

Returning to the Bandura's (1986) conception of triadic reciprocity, behavior is influenced by personal and environmental factors and includes the ways in which teachers think about and respond to settings, other people, and experiences. Given TFA Mississippi's organizational limitations in controlling for or changing personal factors like teacher backgrounds or environmental factors like working conditions, the e-mentoring intervention appropriately fit within Bandura's (1986) conceptual framework by addressing the cognitive aspects of participants' experience of their two-year commitment in the Delta. In other words, e-mentoring supported how teacher's thought about their experiences at and outside of school in a way that was tailored to their interests, goals, and preferences as individuals. The research literature shows that all three types of factors—personal, environmental, and cognitive—are associated with teacher attrition and retention. The e-mentoring intervention, by influencing cognitive factors, did not override personal and environmental factors in instances where one of these two areas seemed to be more salient for participants, such as those who had already decided to move to be closer to family. In instances where people were wavering and their cognitive factors could be more influential, however, e-mentoring seems to be a promising practice for increasing teacher retention.

Those in the field of teacher development can look to other industries that are already using similar approaches, such as online counseling and telemedicine, as evidence that education is ready for more creative virtual approaches to problems in this field as well. P4 wrote, "I think e-mentoring is another growing way to connect with people. Other professions are using electronics to connect people in the work place." The virtual nature of the e-mentoring intervention did not limit the strength of relationships that participants formed with their e-mentor, and the convenience of virtual versus in-person mentoring was seen as a general benefit,

not just one that would help in a rural context. Participants themselves spoke to the great potential of this technology across contexts and across fields. P7 wrote, “I was able to gain discernment on major life decisions that I now feel confident moving forward in the next chapters of my life. I hope e-mentoring because [*sic*] a necessary part in a teacher (or any person for that matter’s life. I am all smiles and I will stay in touch with my e-mentor because of the positive impact it has made on my formative years of my adulthood.”

In general, the findings of the intervention study suggest that e-mentoring had a positive influence on teacher’s experiences of their time with TFA in the Mississippi Delta. Participants on average rated all mediating variables assessed by the survey instrument higher at the end of e-mentoring than prior to its onset, including their beliefs that e-mentoring could influence turnover decisions. In responses to the final post-survey question—“What else would you like to share about e-mentoring?”—half of participants stated that they would recommend e-mentoring to others, though a recommendation was not solicited. The more specific extent to which this positive influence can help to support teacher retention in the region and in other contexts is an area for future study. As P6 wrote, “I hope e-mentoring is explored more moving forward so all teachers have access to a e-mentor program!”

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Appendix A

Needs Assessment Survey

Examining the factors driving Teach For America teacher retention and attrition in Mississippi

The purpose of this research study is to determine the causes and factors that lead to teacher turnover in rural Mississippi public schools, as well as those that lead teachers to stay. The goal is to understand the experiences of teachers currently teaching as corps members in their second year with Teach For America - Mississippi and to follow their decisions currently and after the school year is over.

Please complete your answers as thoroughly and honestly as possible. This survey should take approximately 10 minutes to complete. Any records that identify you will be kept confidential to the extent possible by law.

* Required

Informed Consent

Participant Informed Consent

Title: Examining the factors driving Teach For America teacher retention and attrition in rural Mississippi.

Principal Investigator: Sarah Blackburn, Student, Johns Hopkins University School of Education

Date: Spring, 2016

PURPOSE OF RESEARCH STUDY: The purpose of this research study is to determine the causes and factors that lead to teacher turnover in rural Mississippi public schools, as well as those that lead teachers to stay. The goal is to understand the experiences of teachers currently teaching as corps members in their second year with Teach For America - Mississippi and to follow their decisions currently and after the school year is over.

PROCEDURES: There will be several components for this study:

You will be asked to complete a survey in the spring (April through May 2016) providing detail on your corps experience and sharing your current plans for the following school year.

Additional data from your TLD coach, including classroom culture and alumni likelihood ratings, will be collected (without your name attached to this information).

You may be randomly asked to participate in a brief interview in the summer or fall of 2016 to gain additional insight into your survey responses. If selected, we will work together to schedule a 15-20 minute phone call.

RISKS/DISCOMFORTS: There are no anticipated risks to participants.

BENEFITS: Potential benefits are an increased understanding of how teachers make decisions about staying and leaving. It is believed that improving teachers' experience over their two years could lead to higher retention and that schools with better teacher longevity have stronger outcomes for students. The potential is for a better corps experience in Teach For America - Mississippi and higher rates of retention following the second year.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW: Your participation in this study is entirely voluntary. You choose whether to participate. If you decide not to participate there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

You can stop participation in the study at any time, without any penalty or loss of benefits. If you want to withdraw the study please contact Sarah Blackburn via phone or email: (862) 801-0477, sarah.blackburn@teachforamerica.org.

CONFIDENTIALITY: Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you or your child will be available only to people working on the study, unless you give permission for other people to see the records. All measures will be examined by the Principal Investigator and research affiliates only (including those entities described above). No identifiable information will be included in any reports of the research published or provided to school administration. A participant number will be assigned to all surveys and other data. Surveys will be collected in either electronic or paper format. Survey data completed electronically will be collected via a password protected Survey Monkey account. If you are unable to complete the surveys electronically, paper copies will be provided. In both electronic and paper format, these data will not include identifiable information. All research data including paper surveys and videotapes will be kept in a locked office. Electronic data will be stored on the PI's computer, which is password protected. Any original tapes or electronic files will be erased and paper documents shredded, ten years after collection. Only group data will be included in publication; no individual data will ever be published.

COMPENSATION: You will not receive any payment or other compensation for participating in this study.

IF YOU HAVE QUESTIONS OR CONCERNS: You can ask questions about this research study at any time during the study by contacting Sarah Blackburn via phone or email: (862) 801-0477, sarah.blackburn@teachforamerica.org. If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

SIGNATURES

WHAT YOUR SIGNATURE MEANS: Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study. By signing this consent form, you have not waived any legal rights you otherwise would have as a participant in a research study.

1. Virtual Signature *

Type Your First and Last Name Below

2. Today's Date *

Example: December 15, 2012

Part 1: Demographic Information

3. What is your age? *

4. What is your gender? *

Mark only one oval.

☐

Female

☐

Male

☐

Other: _____

5. What is the name of your placement district? *

6. What is the name of your placement school? *

7. What is the name of the community in which you live? (for rural addresses, name the nearest town) *

8. What is the highest degree or level of education you have completed? *

Mark only one oval.

- ☐ Completed some high school
- ☐ High school graduate/GED
- ☐ Completed some college
- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Completed some postgraduate
- ☐ Master's degree
- ☐ Professional or Doctorate degree

9. What is the highest degree or level of education completed by either of your parents? *

Mark only one oval.

- ☐ Completed some high school
- ☐ High school graduate/GED
- ☐ Completed some college
- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Completed some postgraduate
- ☐ Master's degree
- ☐ Professional or Doctorate degree

10. What were you doing right before becoming a corps member with Teach For America - Mississippi? *

Mark only one oval.

- ☐ Undergraduate education
- ☐ Graduate education
- ☐ Professional career
- ☐ Other: _____

11. How do you describe yourself? (Select one or more options) *

Check all that apply.

- ☐ American Indian or Alaska Native
- ☐ Hawaiian or other Pacific Islander
- ☐ Asian or Asian American
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Non-Hispanic White
- ☐ Other: _____

12. How would you describe the community where you grew up? (If you lived in multiple places, consider the type of community that best represents your experiences.) *

Mark only one oval.

- ☐ Urban
- ☐ Suburban
- ☐ Rural

13. How would you describe the community in which you lived right before joining Teach For America - Mississippi? *

Mark only one oval.

- ☐ Urban
- ☐ Suburban
- ☐ Rural

14. Where did you spend the majority of your time between the ages of 0 and 9? *

Mark only one oval.

- ☐ Midwest
☐ Northeast
☐ Southeast
☐ Southwest
☐ West
☐ Outside the US

15. Where did you spend the majority of your time between the ages of 10 and 18? *

Mark only one oval.

- ☐ Midwest
☐ Northeast
☐ Southeast
☐ Southwest
☐ West
☐ Outside the US

16. Where did you spend the majority of your time between the age of 19 and when you joined Teach For America - Mississippi? *

Mark only one oval.

- ☐ Midwest
☐ Northeast
☐ Southeast
☐ Southwest
☐ West
☐ Outside the US

Part 2: Teaching Experiences

17. How would you describe your relationship with your school leadership? *

Mark only one oval.

	1	2	3	4	5	
Very Weak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Strong

18. Please explain

19. How would you describe the level of support you receive from your school administration? *
- Mark only one oval.

	1	2	3	4	5	
Very Weak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Strong

20. Please explain

21. To what extent do your beliefs about education align with your school leadership's beliefs? *
- Mark only one oval.

	1	2	3	4	5	
Very Weak Alignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Strong Alignment

22. Please explain

23. Describe the top 1-3 areas where you agree with your school leadership's beliefs and practices. *

24. Describe the top 1-3 areas where you disagree with your school leadership's beliefs and practices. *

25. On the average day, how excited do you feel to go to school? *

Mark only one oval.

	1	2	3	4	5	
Very unexcited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very excited

26. Please explain

27. Who are your primary social ties when you are outside of school? (Select one or more options) *

Check all that apply.

- ☐ Colleagues from placement school/district
- ☐ Members of the local community
- ☐ Other corps members
- ☐ Friends/family living outside of Mississippi
- ☐ Significant other (corps member)
- ☐ Significant other (non-corps member)
- ☐ Other: _____

28. Describe the top 1-3 advantages of living and working in Mississippi. *

29. Describe the top 1-3 disadvantages of living and working in Mississippi. *

30. Today, how do you feel about your decision to teach in Mississippi? *

Mark only one oval.

	1	2	3	4	5	
Very dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfied

31. If you answered somewhat or very dissatisfied, what would have made you feel more satisfied during your two years?

32. Is there anything else you'd like to share about your experiences teaching and living in Mississippi?

Part 3: Future Plans

33. At the present moment, how likely are you to remain teaching at your placement school during the upcoming (2016-2017) school year? *

Mark only one oval.

	1	2	3	4	5	
Very unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very likely

34. At the present moment, how likely are you to remain living and/or working in the state of Mississippi during the upcoming (2016-2017) school year? *


Mark only one oval.

	1	2	3	4	5	
Very unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very likely

35. In your own words, describe your plans for what you will be doing in the fall of 2016. *

Thank you!

You might be selected to participate in a follow up phone interview with Sarah in the fall. You can ask questions about this research study at any time during the study by contacting Sarah Blackburn via phone or email: (862) 801-0477, sarah.blackburn@teachforamerica.org.

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 Google Forms

Appendix B

Results of Needs Assessment

Table B1

Turnover and Racial Identity

Racial Identity	Leaving	Moving	Staying
American Indian or Alaska Native	0.00%	100.00%	0.00%
Asian or Asian American	0.00%	100.00%	0.00%
Multi-Racial/Multi-Ethnic	100.00%	0.00%	0.00%
Black or African American	47.37%	26.32%	26.32%
Hispanic or Latino	50.00%	50.00%	0.00%
Non-Hispanic White	20.41%	48.98%	30.61%
Total	28.77%	43.84%	27.40%

Table B2

Turnover and Place Background

Place Background	Leaving	Moving	Staying
Rural	28.57%	42.86%	28.57%
Suburban	23.08%	53.85%	23.08%
Urban	40.00%	25.00%	35.00%
Total	28.77%	43.84%	27.40%

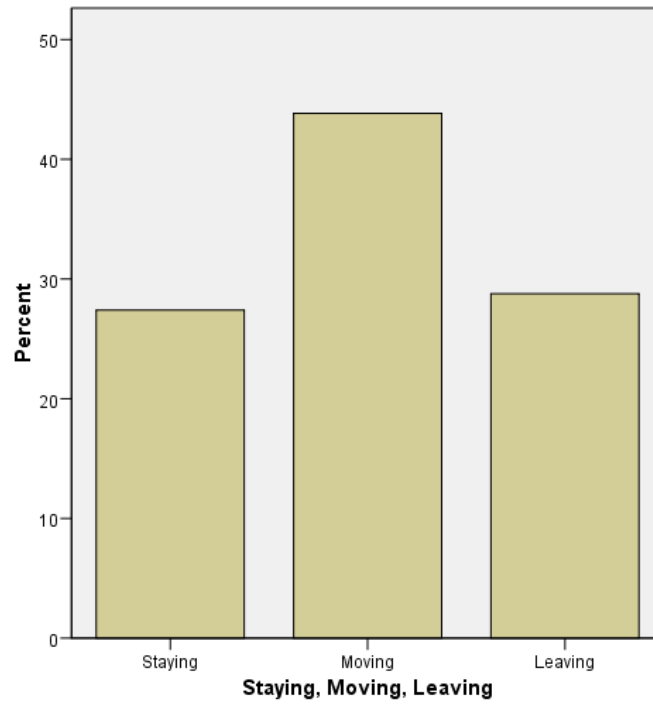
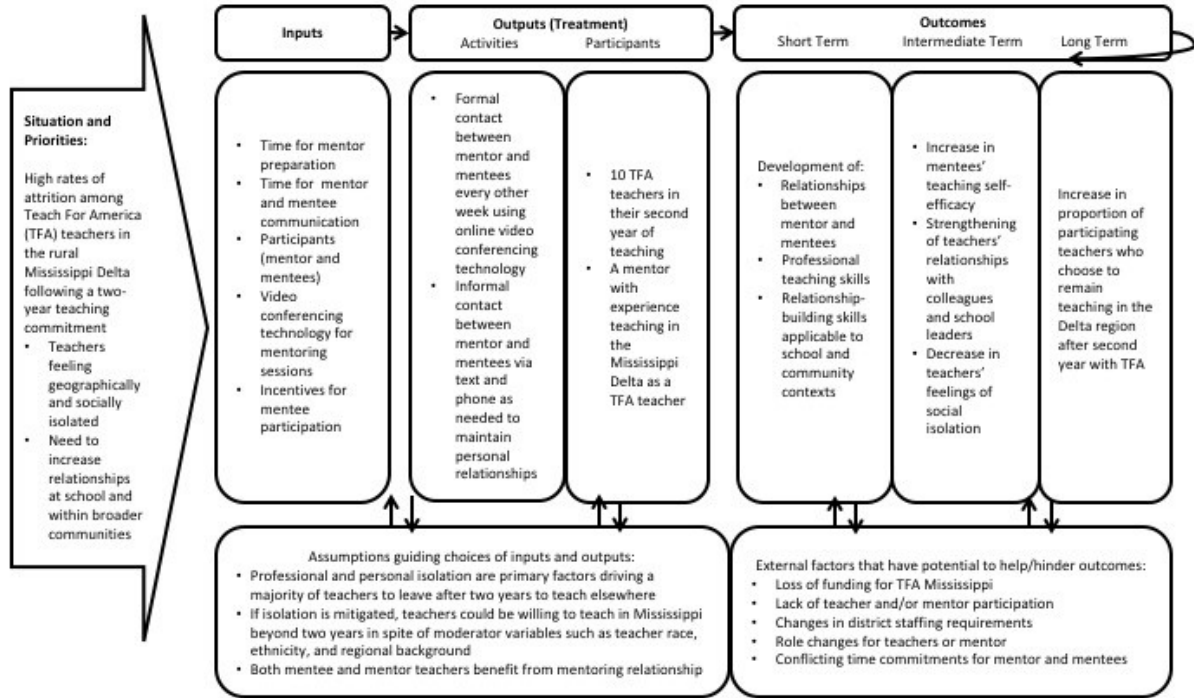


Figure B1. TFA: Mississippi teacher turnover in the spring of 2016.

Appendix C

Logic Model



Appendix D

Summary Matrix

<u>Research Question</u>	<u>Constructs</u>	<u>Measures and Instrumentation</u>	<u>Data Collection</u>	<u>Data Analysis</u>
RQ1: Does e-mentoring have an effect on TFA Mississippi teachers' intentions to stay as teachers in the Delta following their two-year TFA commitment?	Teacher turnover	Multiple-choice survey question	Google Forms	Descriptive statistics
RQ2: What is the effect of e-mentoring on teachers' intentions to stay, move, or leave?	Teacher decisions to stay, move, or leave Moderator variables driving turnover (teacher race and place-type background)	Multiple-choice demographic and open-ended survey question	Google Forms	Grounded approach to coding for themes
RQ3: What aspects of e-mentoring influenced teachers' intentions about stay, move, or leave, if any?	Teacher skill Teacher relationships Feelings of isolation	Likert-type and open-ended survey questions	Google Forms	Grounded approach to coding for themes

Appendix E

Outcome Evaluation Survey (Pretest-Posttest)

Please complete the following as accurately as possible. All identifying information will be removed once surveys are collected. Email information is only being collected to keep track of completion and will not be included in the final data set.

* Required

1. Email address *

Demographic Information

2. What is your age? *

3. What is your gender? *

Mark only one oval.

☐

Male

☐

Female

☐

Other:

4. What is the name of your placement district? *

5. What is the name of your placement school? *

6. What is the name of the community in which you live? *

For rural addresses, name the nearest town

7. What is the highest degree or level of education you have completed? *

Mark only one oval.

- ☐ Completed some high school
- ☐ High school graduate/GED
- ☐ Completed some college
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Completed some postgraduate
- ☐ Master's degree
- ☐ Professional or Doctorate degree

8. How do you describe yourself? (Select one or more options) *

Check all that apply.

- ☐ Indigenous/Native American or Alaska Native
- ☐ Hawaiian or other Pacific Islander
- ☐ Asian or Asian American
- ☐ Black or African American
- ☐ Hispanic or Latinx
- ☐ Non-Hispanic White
- ☐ Other: _____

9. How would you describe the community where you grew up? *

*If you lived in multiple places, consider the type of community that best represents your experiences.
Mark only one oval.*

- ☐ Urban
- ☐ Suburban
- ☐ Rural

Future Intentions

10. As of now I intend to *

Mark only one oval.

- ☐ Remain teaching in the Delta after my two-year commitment
- ☐ Teach outside of the Delta after my two-year commitment
- ☐ Leave the teaching profession after my two-year commitment

11. Why? *

Perceptions of E-mentoring

12. Rate the following items on a scale from strongly disagree (1) to strongly agree (5) *

Mark only one oval per row.

	1 (strongly disagree)	2 (somewhat disagree)	3 (neutral)	4 (somewhat agree)	5 (strongly agree)
I can build strong relationships with an e-mentor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can build stronger relationships with my school leader as a result of e-mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can build stronger relationships with my colleagues at school as a result of e-mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can improve my teaching skill as a result of e-mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can gain a better understanding of my regional and/or community context as a result of e-mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Do you believe that e-mentoring can influence your decision to stay, move, or leave at the end of this year? Why or why not? *

14. What are the greatest benefits of e-mentoring? *

15. What are the greatest drawbacks of e-mentoring? *

16. What else would you like to share about e-mentoring?

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Appendix F

Outcome Evaluation Data Collection Matrix

<u>Indicator</u>	<u>Role of Indicator</u>	<u>Data Source(s)</u>	<u>Frequency</u>	<u>Responsibility</u>
Teachers' intentions to stay as teachers in the rural Mississippi Delta, move to teach in another state, or leave the profession entirely	Outcome (dependent) variable	A survey that asks teachers to share their intentions and provide additional, descriptive information about these intentions	Once each at the beginning and end of e-mentoring during teachers' second year with TFA Mississippi	Researcher
Demographic information related to teachers' racial, educational, and geographic background	Moderator variables	Survey	Once each at the beginning and end of e-mentoring during teachers' second year with TFA Mississippi	Researcher
Qualitative descriptions of teaching self-efficacy, relationships in and out of school, and feelings of isolation	Mediating variables	Survey	Once each at the beginning and end of e-mentoring during teachers' second year with TFA Mississippi	Researcher

Appendix G

Timeline of Instructional Events

Month (2019)	Phase	Instructional Events
January	Preparing Phase	<p>Mentor links purpose of mentoring initiative to personal experiences and goals</p> <p>Mentor determines overall principles of effective mentoring through introduction to the primary learning objectives</p> <p>Mentor learns to use video conferencing technology and practice as learners during training sessions</p> <p>Mentor formulates strategy for initial relationship building with mentees</p>
January	Negotiating Phase	<p>Mentor establishes a plan to co-develop with mentees a statement of purpose, ways of working together, communication expectations, and boundary setting for the mentoring relationship</p>
February-April	Enabling Phase	<p>Mentor understands and applies principles of adult learning in work with mentees</p> <p>Mentor understands how the culture and history of the Mississippi Delta influences outsider teachers' abilities to build and maintain relationships</p> <p>Mentor regularly evaluates the status of relationships with mentees and adjust strategies as needed</p>
April	Closing Phase	<p>Outcome evaluation of the effectiveness of e-mentoring</p>

Appendix H

Mentee Recruitment Email

Hello,

As you are nearing the end of your second year here in Mississippi, I am writing to invite you to consider participating in an e-mentoring program beginning in the spring. This program is part of a research study to be conducted during the 2018-2019 school year. This research is a part of my doctoral studies at Johns Hopkins University's School of Education and will be conducted in conjunction with my adviser Dr. Annette Anderson, Associate Professor and Assistant Dean for Community Schools.

This study aims to understand the potential benefits of e-mentoring for teachers in rural Mississippi Delta schools. To participate in this study, you will work closely with me in an online mentoring relationship. You will communicate with your mentor during hour-long online check-ins to occur every other week between January 2019 and March 2019. During these conversations, we will work on issues relevant to your classroom and teaching context including, but not limited to, instructional best practices, improving relationships with administrators, and building understanding of cultural context.

Six elective professional development credits will be provided for your successful completion of this program. Because space in the program is limited, a random group of 10 teachers will be selected from those who express interest. If you are interested in participating, please email me at sblackb5@jhu.edu by January 7th, 2019.

Feel free to reach out to me by email, phone call, or text message with any questions.

Sarah Blackburn

Doctoral Candidate, Johns Hopkins University

Teach For America, Mississippi Delta 2009

sblackb5@jhu.edu

662-832-5161

Appendix I
Participant Information

Participant Code	Gender	Age at end of e-mentoring	Race	Place-type background	Prior to e-mentoring	Following e-mentoring
P1	Female	23	Non-Hispanic White	Rural	Leaver	Stayer
P2	Male	24	Asian or Asian American	Suburban	Leaver	Leaver
P3	Male	23	Non-Hispanic White	Suburban	Leaver	Mover
P4	Female	39	Black or African American	Suburban	Stayer	Stayer
P5	Male	26	Non-Hispanic White	Suburban	Stayer	Stayer
P6	Female	27	Non-Hispanic White	Suburban	Stayer	Mover
P7	Female	23	Black or African American	Urban	Stayer	Stayer
P8	Male	39	Hispanic or Latinx	Urban	Stayer	Stayer
P9	Male	23	Non-Hispanic White	Urban	Stayer	Stayer
P10	Female	30	Non-Hispanic White	Suburban	Mover	Mover

Appendix J

Informed Consent Form

Johns Hopkins University
Homewood Institutional Review Board (HIRB)

Informed Consent Form	
Title:	E-Mentoring for Teachers in the Rural Mississippi Delta: Mentee Consent
Principal Investigator:	Dr. Annette Anderson, Associate Professor and Assistant Dean for Community Schools, Johns Hopkins University School of Education Annette.Anderson@jhu.edu (410) 516-2012
Date:	November 1, 2018

PURPOSE OF RESEARCH STUDY:

The purpose of this research study is to determine the potential benefits of e-mentoring for Teach For America (TFA) teachers in the rural Mississippi Delta. This study aims to understand the extent to which e-mentoring can influence teachers' professional skills, relationships in and out of school, and decisions about remaining in the classroom beyond TFA's two-year commitment. We anticipate that approximately 10 people will participate in this study.

PROCEDURES:

There will be several components to this study:

1. Mentees will participate in hour-long, online e-mentoring sessions every other week with their mentor for a total of six sessions. During these sessions, participants and their mentor will discuss issues relevant to the classroom and teaching context including, but not limited to, instructional best practices, improving relationships with administrators, and understanding cultural context. E-mentoring will begin in January 2019 and will conclude in March 2019.
2. Mentees will complete a pre- and post-survey about their intentions for the upcoming school year and perceptions of the effectiveness of e-mentoring.

RISKS/DISCOMFORTS:

The risks associated with participation in this study are no greater than those encountered in daily life.

BENEFITS:

Elective professional development credits will be provided for your participation in this program. This study may benefit future Corps Members with TFA Mississippi if the results lead to a better understanding of how e-mentoring can support a stronger personal and professional experience for Corps Members.

Title: E-Mentoring for Teachers in the Rural Mississippi Delta: Mentee Consent PI: Dr. Annette Anderson Date: November 1, 2018
--

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:

Your participation in this study is entirely voluntary: You choose whether to participate. If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

If you choose to participate in the study, you can stop your participation at any time, without any penalty or loss of benefits. If you want to withdraw from the study, please email Sarah Blackburn at sblackb5@jhu.edu.

CIRCUMSTANCES THAT COULD LEAD US TO END YOUR PARTICIPATION:

Under certain circumstances we may decide to end your participation before you have completed the study. Specifically, we may stop your participation if you resign or are released from your school district or from TFA Greater Delta.

CONFIDENTIALITY:

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Study records will be kept on a password-protected folder used by Sarah Blackburn. To protect confidential information, code numbers will be used instead of participant names on all study records including professional development reports, survey data sheets, and copies of email communication.

COMPENSATION:

If you satisfactorily complete the study, you will receive six elective professional development credits to compensate you for your participation. If you end your participation before completing the study, you will not receive credits.

IF YOU HAVE QUESTIONS OR CONCERNS:

You can ask questions about this research study now or at any time during the study, by contacting Sarah Blackburn at 662-832-5161 or sarahsoonling@gmail.com.

If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

SIGNATURES

WHAT YOUR SIGNATURE MEANS:

Your signature below means that you understand the information in this consent form. Your

Written Informed Consent Form (11/11)
Page 2 of 3

Title: E-Mentoring for Teachers in the Rural Mississippi Delta: Mentee Consent PI: Dr. Annette Anderson Date: November 1, 2018
--

signature also means that you agree to participate in the study.
By signing this consent form, you have not waived any legal rights you otherwise would have as a participant in a research study.

Participant's Signature

Date

**Signature of Person Obtaining Consent
(Investigator or HIRB Approved Designee)**

Date

Appendix K

Results of Pre- and Post-Surveys

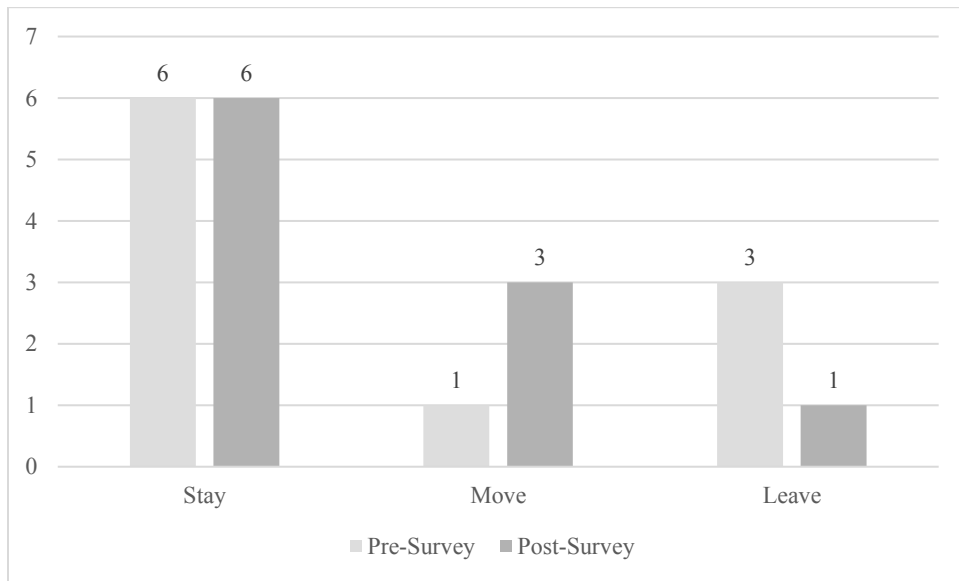


Figure K1. Participant decisions about turnover prior to and after e-mentoring.

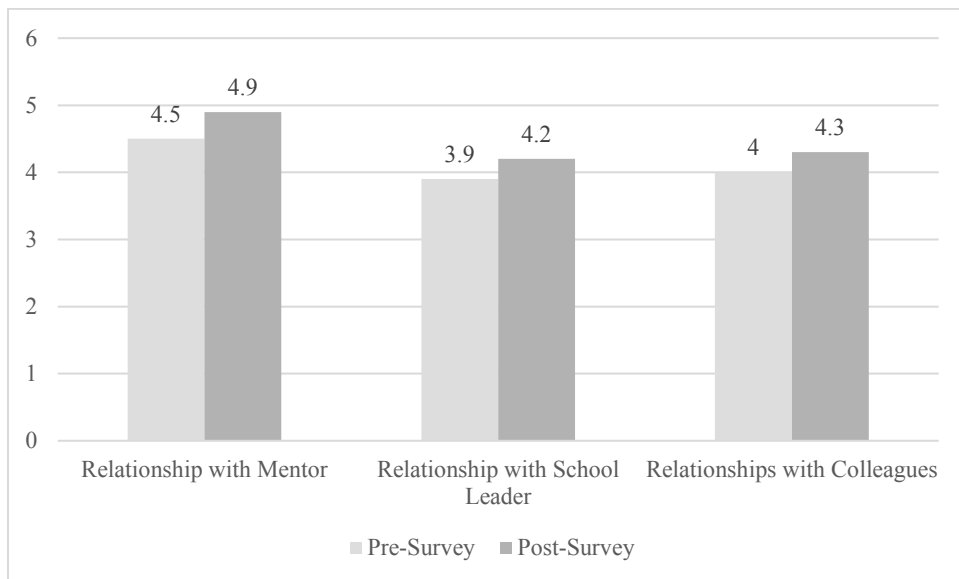


Figure K2. Mean responses about e-mentoring and relationships.

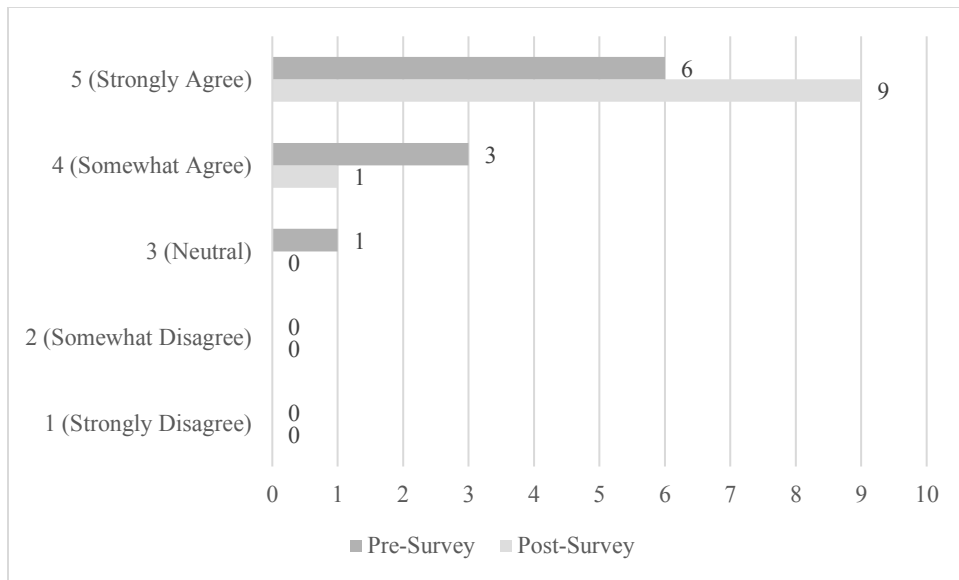


Figure K3. Distribution of responses to “I can build strong relationships with an e-mentor”

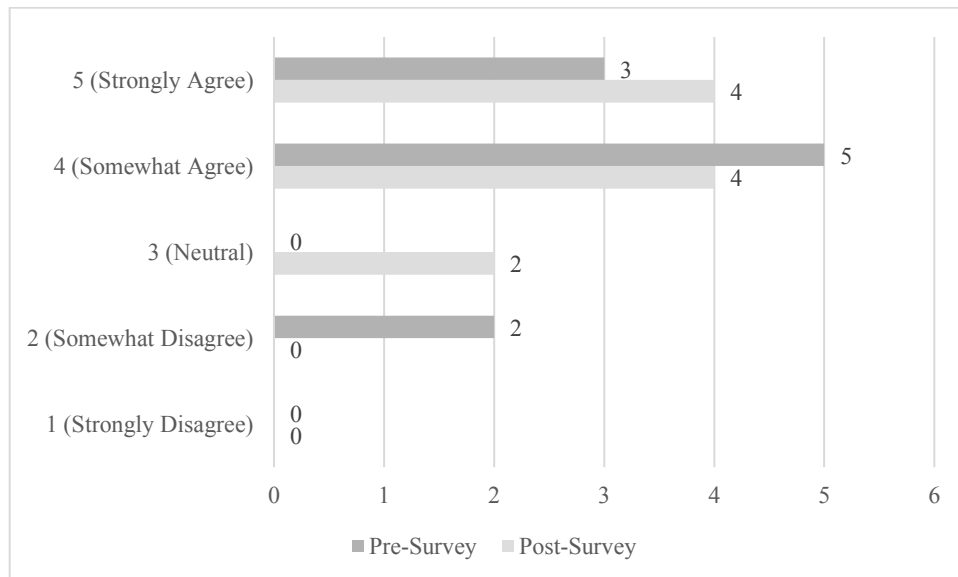


Figure K4. Distribution of responses to “I can build stronger relationships with my school leader as a result of e-mentoring”

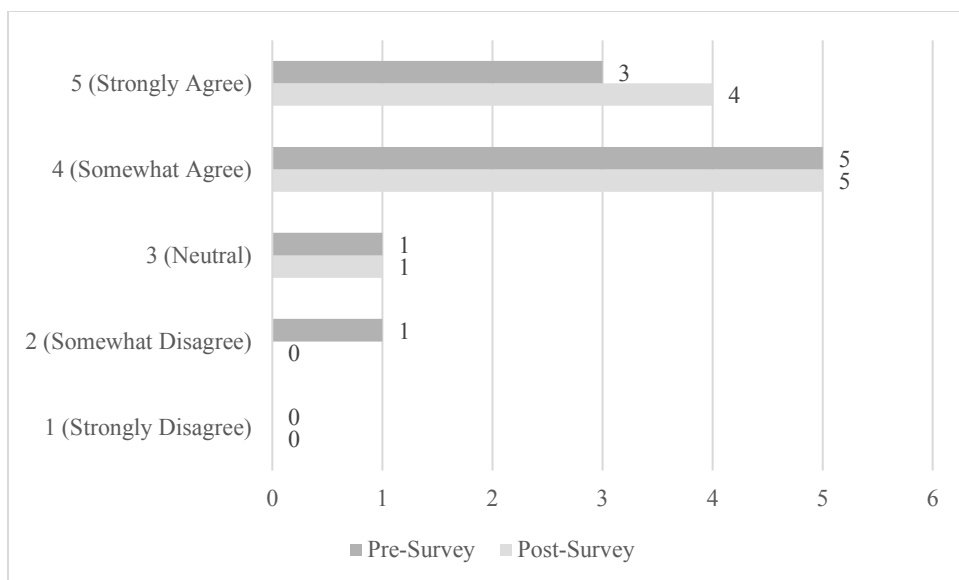


Figure K5. Distribution of responses to “I can build stronger relationships with my colleagues at school as a result of e-mentoring”

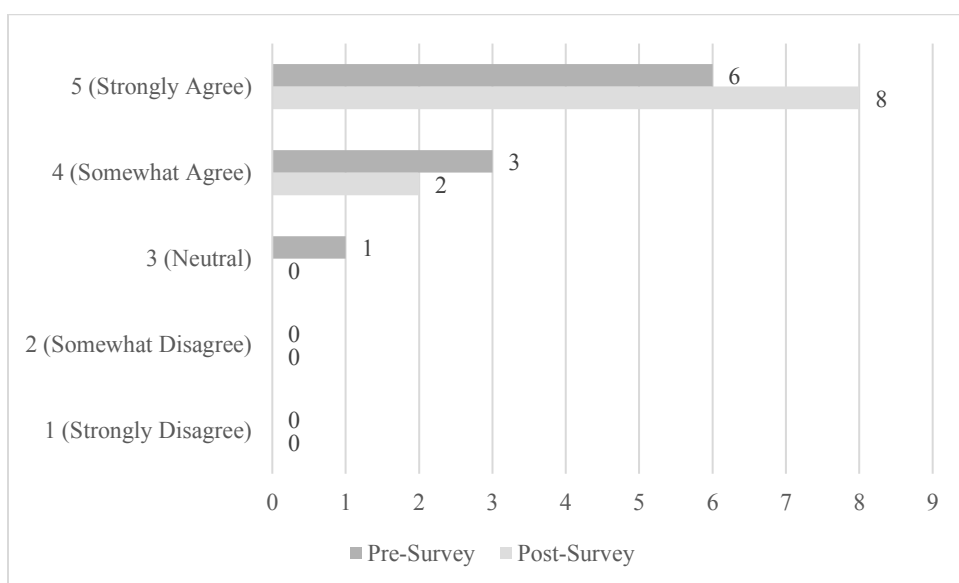


Figure K6. Distribution of responses to “I can improve my teaching skill as a result of e-mentoring”

Curriculum Vitae: Sarah-SoonLing H. Blackburn

513 Bowie Dr. • Oxford, MS 38655 • 662-832-5161 • sarahsoonling@gmail.com

Academic Background

- | | |
|-----------|--|
| 2015-2020 | Johns Hopkins University , Baltimore, MD
Doctor of Education |
| 2011-2012 | Institute of Education, University of London , London, UK
Master of Arts in Social Justice and Education |
| 2005-2009 | Haverford College , Haverford, PA
Bachelor of Arts in English
Concentration in Education |

Professional Experience

- | | |
|--------------|--|
| 2020-present | “The Asian Americans” Documentary Series, PBS LearningMedia
Curriculum Team Lead |
| 2018-present | Teaching Tolerance, Southern Poverty Law Center, Montgomery, AL
Professional Development Trainer |
| 2013-2018 | Teach For America, Mississippi Region
Director of Learning Environment and DEI |
| 2017-2018 | Teach For America, Delta Institute
Culture Coordinator; Content Coordinator |
| 2017-2018 | Teach For America
Co-Chair Asian American/Native Hawaiian/Pacific Islander Summit |
| 2012-2014 | Quitman County Elementary School, Lambert, MS
Third Grade Teacher; Leadership Team Member |
| 2011 | Teach For America, Delta Institute
Corps Member Adviser |
| 2011 | Teach For Malaysia
Pre-Service Consultant |
| 2009-2011 | Lake Village Upper Elementary School, Lake Village, AR
Fourth Grade Teacher; Grade Level Chair |